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*Edward S. North*  
**REPORT**

**OF THE**

**OPERATIONS OF THE ENGINEER DEPARTMENT**

**OF THE**

**DISTRICT OF COLUMBIA**

**UNDER THE DIRECTION OF THE**

**ENGINEER COMMISSIONER, DISTRICT OF COLUMBIA**

**FOR THE**

**YEAR ENDING JUNE 30, 1895.**

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**WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1895.**



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WASHINGTON:

GOVERNMENT PRINTING OFFICE

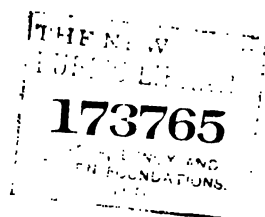
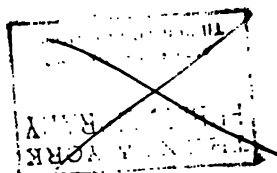
1895.

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EXTRACT FROM THE REPORT OF THE COMMISSIONERS OF THE DISTRICT  
OF COLUMBIA FOR THE YEAR ENDED JUNE 30, 1895.

OFFICE OF THE COMMISSIONERS  
OF THE DISTRICT OF COLUMBIA,  
*Washington, December 2, 1895.*

The PRESIDENT:

The Commissioners of the District of Columbia submit herewith their report of their official doings for the fiscal year ended June 30, 1895.

The details of the transactions of the government of the District are mainly set forth in the accompanying statements of the officials immediately in charge of the several departments of said government, but the Commissioners have taken occasion to preface those exhibits with special reports and comments on matters of general local interest, and with recommendations for legislation designed to improve the administration of the affairs committed to their charge.

\* \* \* \* \*

STREET AND ALLEY IMPROVEMENTS.

Nearly 54,000 square yards of sheet or block asphalt were laid on roadways, principally in Washington. The area of asphalt at the beginning of the fiscal year, including some remaining coal-tar pavements, was about 2,500,000 yards. About 20,000 square yards of vitrified block or asphalt block were laid on alleys.

The prices for standard sheet asphalt, due to active competition, were the smallest yet obtained, being \$1.53 and \$1.68 per square yard on 4-inch and 6-inch concrete, respectively, exclusive of grading. The prices for asphalt block were \$1.78 and \$2.25 per square yard, on gravel and concrete, respectively. The contract prices for 1896 are \$1.94 and \$2.19 for sheet asphalt, and \$1.84 and \$2.25 for asphalt block per square yard. From each of these prices 5 cents should be deducted for comparison with previous years' prices, since wages of inspectors proportionate to that amount are, by the last specifications, charged against the contract cost. About 8,000 square yards of sheet asphalt were laid upon cobble, old stone, or macadam base. It is contemplated to make more extended use of existing cobble and old stone pavements by covering them with asphalt.

The street mileage on July 1, 1895, of smooth pavements was 116.4; of standard granite block or vitrified brick, 29.6; macadam, 16, and cobble or old stone, 14.4.

On alleys the mileage of smooth pavements was 23.4, and of granite block or cobble, 31.5.

The mileage of unimproved streets in Washington was 18.2. Owners of property on many of these streets are urgently demanding pavements, or, at least, grading and regulating. The annual appropriations for street improvements for the last four years, inclusive of 1896, averages \$192,000; the average for the preceding four years was \$600,000.

116.4  
29.6  
16  
14.4  
23.4  
31.5  
18.2  
192  
600

Now that the laying of water mains and sewers in Washington is well advanced, and since a late law secures the making of service connections with premises when the street is about to be paved, there is additional reason for more rapidly extending the paving than has been done in the past few years.

Nearly 29,000 square yards of concrete walk were laid during the year, or more than the whole amount for the five years preceding. The mileage has increased in a little greater proportion than the area on account of the later policy of leaving nearly continuous tree spaces on residential streets. The contract price for this pavement was \$1.44 per square yard; the contract price for 1896 is \$1.33 per square yard. About 18 000 square yards have been laid since July 1, 1895.

About 20,000 square yards of brick sidewalk were laid, at an average cost of 70 cents per square yard, and generally upon new or partly improved streets. The assessment and permit law of 1894, under which sidewalks are laid and alley improvements made, and at half cost to owners of abutting property, has generally proved satisfactory.

The repair of pavements—roadway, alley, and brick sidewalks—is an extensive work, although effort is made to curtail cuts in pavements to secure excellence of work in first construction.

#### STREET TREES AND DISTRICT PARKS.

The trees along the curbs number about 75,000; these were partly cared for, the appropriation having been too limited for full service. Six hundred and forty new trees were planted, and 580 dead or obstructing trees removed.

Special care is taken in selecting, spacing, planting, and protecting the trees. The impervious pavements are becoming so extensive that they retard the growth of the trees. It is considered desirable to give ample tree spaces, cultivate them around young trees, and improve the spaces between trees; these betterments were made as far as practicable with available funds.

Operations of this service are under the advice of a commission of three experienced arboriculturists, who serve voluntarily and without compensation, and to whom the public are much indebted for their aid in establishing and preserving the street trees; no other single feature adds more to the beauty, comfort, and even healthfulness of Washington.

The District has thirty-six small parks, a very few of which have been partly improved. It is desired to replan and improve the District park north of the Center Market, for doing which an amount is included in the estimates for 1897.

#### WATER SERVICE.

Nearly 25 miles of water mains were laid, exclusive of replaced mains along street railway conduits and of connections to fire hydrants and premises. More than one half of the mains were laid in Washington.

A 5,000,000-gallon high-duty pumping engine, with two boilers, was furnished and partly erected at the U street pumping station, under contract, by the Nordberg Manufacturing Company of Milwaukee. The erection of the engine has since been completed, the engine and boilers tested, accepted, and put in service.

New plans and specifications for the high service reservoir at Fort Reno were drawn. The masonry construction of the reservoir has been commenced since the end of the fiscal year, and is now nearing completion.

Additional land was purchased at the U street station for storage ground and future extensions. Plans were drawn and arrangements made for the erection of a new stone, brick, and metal pump house on the site of the old frame building without interrupting the pumping. The new pump house is under construction.

Forty-seven public wells were abandoned and filled, leaving 171 in use on June 30, 1895. Two deep wells were driven, one of which is on the Brightwood road at Brightwood, and the other at Sixth and G streets SW. Both of the wells were driven to a depth of about 150 feet with 6-inch wrought iron pipe, except through rock. A supply of water of good quality was obtained in each well. The existing public wells are located where they would be of service were the water above suspicion, and, in that case, would undoubtedly be a great benefit and comfort to people who can not afford to pay water rent or to buy ice. If polluted shallow wells could be replaced by deep-driven ones, properly fitted and furnishing good water, much benefit would be conferred. The two experimental driven wells, together with experience from similar wells elsewhere in the District, indicate that good water can generally be had at a reasonable depth and cost. The estimates for the year 1897 include an item of \$10,000 for driven wells.

Referring to the ordinary shallow wells, the report of the engineer in charge of the water department properly says:

In any metropolitan district such wells are liable to contamination from sewage and surface drainage, and it may be confidently asserted that sooner or later the water in all of them will become unfit for potable purposes. Continued efforts are being made to have the water from the public wells in the District frequently examined chemically, and upon the concurrent showing of two examinations by different chemists that the water in any well is so contaminated as to be unfit for use, the well has been closed. These wells are frequently located in close proximity to sewers and in places that are otherwise insanitary. Since sewers are rarely absolutely water tight, all wells near them are surely liable to contamination with sewage at no distant time. As a matter of fact, a large percentage of all the wells so far examined have been found to be polluted, and it is safe to assert that every shallow well in a densely populated metropolitan district is, or soon will be, a menace to the public health.

Twenty nine water meters were placed on premises during the year, making the number of meters in use at the end of the year 202. It was desired to extend the meter service for all consumption of water for commercial purposes, and generally to all large consumers, as the law contemplates. An objection by the consumers to the introduction of meters is the first cost of good, reliable meters of sufficient capacity. Private ownership of meters has proven unsatisfactory for the public interests. To obviate the objection, and to select, own, and control the meters, the water department proposed to buy them, only requiring the consumer to pay for erection and maintenance. The Comptroller of the Treasury decided, however, that the consumer should, under the law, provide the meter as well as place and maintain it. Rigid measures, as far as legal, were then applied, with the result that since June 30, 1895, 175 additional meters have been put in use.

A late decision of the court of appeals making water-main assessments invalid where laid by the Commissioners and not by the water registrar, an office which has been vacant for several years, has resulted in a severe reduction of the expected revenues of the water department, and will thereby curtail intended extensions of the service. The granting of authority in this case to make reassessments appears just to the property owners who have paid their assessments and otherwise proper, and may obviate the necessity of an appropriation from the general revenues for the aid of the water department.



11/10/1911  
11/11/1911









2-15  
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*Edward T. North*  
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OF THE

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OF THE

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UNDER THE DIRECTION OF THE

ENGINEER COMMISSIONER, DISTRICT OF COLUMBIA

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YEAR ENDING JUNE 30, 1895.



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1895.

2-15  
1895

The age of these pavement and the cost of repairs are given in the following tables:

*Area of concrete pavements.*

Calendar year.	Coal tar.	Asphalt.	Asphalt block.	Total.	Calendar year.	Coal tar.	Asphalt.	Asphalt block.	Total.
	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>		<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>
1871 .....	17, 017			17, 017	1885 .....		32, 497	8, 934	41, 431
1872 .....	163, 991			163, 991	1886 .....	6, 055	6, 041	38, 140	50, 236
1873 .....	279, 578	4, 540		284, 118	1887 .....	112, 203	15, 993	37, 957	166, 153
1874 .....	29, 614	7, 188		36, 802	1888 .....	10, 100	42, 290	7, 834	60, 224
1875 .....	179, 658	7, 203		186, 861	1889 .....	13, 222	109, 072	53, 508	175, 802
1876 .....	14, 755	58, 904		73, 659	1890 .....		115, 232	25, 229	140, 461
1877 .....	84, 319	26, 436		110, 755	1891 .....		147, 900	51, 164	199, 064
1878 .....	676	18, 547	1, 093	20, 316	1892 .....		55, 270	10, 358	65, 628
1879 .....	12, 840	118, 206	3, 214	134, 260	1893 .....		52, 230	16, 607	68, 837
1880 .....		84, 905	3, 214	88, 119	1894 .....		32, 815	8, 738	41, 553
1881 .....		85, 757	1, 846	87, 603	1895 .....		42, 771	5, 729	48, 500
1882 .....		91, 029	4, 937	95, 966					
1883 .....		109, 121	14, 130	123, 251	Total.	924, 028	1, 343, 812	302, 499	2, 570, 339
1884 .....		79, 865	9, 867	89, 732					

To the above must be added 82,177 square yards of asphalt laid by private parties, of which the office has no accurate record.

Of the coal-tar pavement there are now remaining only 502,683 square yards, the old pavement having been resurfaced with sheet asphalt.

*Cost of maintaining concrete pavements.*

Year.	Resurfacing.			Repairs.			Resurfacing and repairs.		
	Square yards.	Cost.	Cost per square yard.	Square yards not under guaranty.	Cost.	Cost per square yard.	Square yards.	Cost.	Cost per square yard.
1879 .....	17, 864	\$29, 691	\$1. 66						
1880 .....	53, 486	59, 187	1. 11						
1881 .....	20, 451	31, 300	1. 53						
1882 .....	31, 172	45, 742	1. 47						
1883 .....	19, 445	29, 682	1. 52						
1884 .....	19, 427	31, 556	1. 62	812, 070	\$12, 043	\$0. 015	831, 497	\$43, 599	\$0. 052
1885 .....	15, 991	27, 208	1. 70	917, 255	22, 000	. 024	933, 246	49, 208	. 052
1886 .....	18, 354	29, 566	1. 60	1, 009, 005	18, 168	. 018	1, 027, 359	47, 734	. 046
1887 .....	24, 839	35, 484	1. 43	1, 107, 722	29, 502	. 027	1, 132, 561	64, 986	. 057
1888 .....	29, 200	34, 424	1. 17	1, 203, 569	45, 747	. 039	1, 232, 829	80, 171	. 063
1889 .....	44, 972	55, 587	1. 24	1, 315, 561	35, 802	. 027	1, 360, 533	91, 389	. 067
1890 .....	97, 846	166, 440	1. 64	1, 357, 609	43, 392	. 032	1, 455, 455	209, 832	. 144
1891 .....	49, 976	69, 411	1. 40	1, 343, 535	46, 445	. 034	1, 393, 511	115, 856	. 083
1892 .....	51, 583	79, 493	1. 54	1, 396, 386	62, 460	. 044	1, 447, 969	141, 959	. 098
1893 .....	65, 270	97, 729	1. 50	1, 634, 534	45, 825	. 028	1, 699, 804	143, 551	. 085
1894 .....	60, 699	92, 493	1. 52	1, 774, 221	47, 724	. 027	1, 834, 920	140, 218	. 076
1895 .....	55, 805	110, 191	1. 94	1, 907, 566	29, 372	. 015	1, 963, 371	139, 563	. 070
Average .....			1. 51			. 023			. 077

The increased cost of resurfacing during the fiscal year was due to the fact that many of the old coal-tar pavements were so much out of shape that it became necessary to wholly remove and relay them with new pavements.

**CURRENT REPAIRS TO STREETS, AVENUES, AND ALLEYS.**

This appropriation provides for the repairs of all roadway pavements other than those paved with asphalt or coal tar, all alley pavements not relaid under the permit system, sidewalks around public reservations, all repairs made necessary by the growth of trees, and all cuts made by the sewer department. This work is done by hired labor. A detailed statement of work under this appropriation will be found in the report of the superintendent of streets.

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## STREET AND STEAM RAILWAYS.

The following table shows the street railways in actual operation July 1, 1895:

Name.	Mileage operated.				Motive power.
	Tracks owned by company.		Tracks owned by other companies.		
	Double.	Single.	Double.	Single.	
Washington and Georgetown .....	10.26	0.55			Cable.
Metropolitan .....	9.64	3	0.11	0.30	Horse and electric.
Columbia .....	2.86				Cable.
Eckington and Soldiers' Home .....	7.13	1.57	.89	.23	Horse and electric.
Belt Line .....	5.90	1.22	.36		Horse.
Rock Creek .....	5.48				Electric.
Brightwood .....	4.60	1.90			Do.
Tennallytown .....	4.30				Do.
Anacostia and Potomac .....	5.42	.23	1.27		Horse.

At the last session of Congress the following acts affecting street railroads were passed:

Public act No. 75: "An act authorizing the Metropolitan Railway Company to lay a single track upon L, Water, and P. streets southwest; to lay a single track upon P, Thirty-sixth, Prospect, and Thirty-fifth streets, Georgetown; requiring the Brightwood, Rock Creek, Georgetown, and Tennallytown railway companies to sell four coupon tickets for twenty-five cents, good for one continuous ride in the District of Columbia over the lines of said companies and the Metropolitan Railroad Company; authorizing the Metropolitan and Rock Creek railroad companies to contract with each other for the purchase, sale, lease, or joint operation of the line on Florida avenue and U street, or any part thereof."

Public act No. 89: "An act authorizing the Rock Creek Railroad Company to contract with any street railway company owning or operating a connecting or intersecting line for the joint management, lease, or purchase of such connecting or intersecting line and operating the same in connection with its original line: *Provided*, That only one fare, not exceeding the rate now authorized by law, shall be charged for a single continuous ride in the District of Columbia over the lines affected by such contract, or any part thereof. In the event that said company enter into such contract the company is authorized to change its name to the Capital Traction Company."

Public act No. 99: "An act amending the charter of the Maryland and Washington Railway Company, authorizing said company to institute proceedings for the condemnation of so much land as may be required for the extension of Rhode Island avenue: *Provided*, That the strip so to be acquired by condemnation shall be one hundred and thirty feet in width, and shall be located according to the official plats for the extension of Rhode Island avenue: *And provided further*, That all the land within the line of the proposed extension of Rhode Island avenue which shall be acquired by purchase or condemnation shall, by appropriate conveyance, be dedicated before tracks are laid therein. That the line of said railway company from Fourth street northeast extended to a point at or near the intersection of Rhode Island avenue extended shall be commenced within six months and completed within twelve months from March second, eighteen hundred and ninety-five. That the company is authorized to extend its line along Rhode Island avenue to North Capitol street, and thence south over the line of the Eckington and Soldiers' Home Railway Company to F street."

Public act No. 100: "An act to authorize the Washington and Marlboro Railroad Company of Maryland to extend its line into and within the District of Columbia."

Public act No. 101: "An act to incorporate the Capital Railway Company."

During the fiscal year the transformation of the Columbia Railway into a cable railway was completed. The work was well done, and the streets through which it passes are now all in good condition. The pavement between the rails is vitrified brick and between tracks sheet asphalt. Two longitudinal courses of brick are laid adjacent to the rails. Wherever possible, projections above the pavement upon this road were avoided, and, in consequence, the streets have been left in a better condition than by any previous conduit railway company.

During the year the transformation of the Ninth street line of the Metropolitan Railway into a conduit electric road was begun and nearly completed. For future reference, the following description of the work was obtained from the Street Railway Journal, August, 1895, and from Mr. A. N. Connett, the engineer in charge:

The exact length of the track from Tenth street and Florida avenue to the southern terminus, at P and Four-and-a-half streets SW., is 40,800 feet, or 7.73 miles. The slot rail is the same as used on the Baltimore City Passenger Railway Company's cable lines, with the exception of the water drip at the edge of the slot; it weighs 67 pounds to the yard. The wheel rail is 7 inches deep, with the Washington groove; its weight is 83 pounds. The guard rail is same depth and takes the same splice bar; its weight is 87 pounds. The splice bars are 30 inches long, nine-sixteenths of an inch thick, and bolted on with six 1-inch bolts. The yokes weigh 267 pounds. Their depth from grade is 31 inches. The depth of the tube is 25 inches. Every 13½ feet a large manhole frame and cover, extending from track to slot rail and 20 inches wide, is placed; opposite to this is placed a small frame and cover just sufficiently large to hold an insulator. The corner of the large frame is also arranged to take the opposite insulator. The insulators in this way are clear from and entirely independent of the yokes.

The conduit is formed entirely of Portland cement concrete. In the entire space taken up by and between and 2 feet outside of the outer rails a concrete paving base is placed, made of natural cement.

The insulator is of porcelain. It is quite large, being 4 inches in diameter and 7½ inches deep over all. It is held in an iron cap, and in turn it supports a rod by having the corrugations filled with neat Portland cement. The cement has proved very satisfactory; in fact, the assembled insulator seems to be abundantly strong mechanically for the rough usage to which it may be subjected. A malleable iron clip is held by cast-iron nuts to the insulator bolt, and the clip in turn supports the conductor rail. Adjustment in a direction at right angles to the slot is provided for in the clip where the insulator bolt is held, while in a direction parallel to the slot the adjustment is made in the seat for the insulator case on the frame. The conductor rail is made of mild steel. It is a T section, weighing 23½ pounds to the yard. Its equivalent section in copper is assumed to be 300,000 circular mils. One-half of the road is double and the remaining half single bonded. These are of the type called the "Chicago rail bonds." Between the bond terminals 000-stranded cable is used to make them flexible. The circuit being made on the insulated conductor rails, the wheel rails are not bonded. Hatches are provided every 400 feet, by which the conductor rails, 27 feet long, are placed in the tube after it is finished.

For the purpose of drainage the tracks are connected by large sewer pipes to the manholes, from which connection is made to the sewer. The tracks are so drained about every 400 feet. Feed wire ducts are laid from the station to Ninth and U streets nearly the whole length of the line. To Ninth and F streets, a distance of 10,400 feet, twelve-way ducts are laid, and from there on four-way ducts are used. The reason for laying the twelve-way duct is that the station is intended to operate hereafter the east half of the east and west line, which crosses the Ninth street line at F street. For the Ninth street line 35,600 feet of 1,000,000 C. M. and 32,400 feet of 500,000 C. M. lead-covered cable is used.

The road is divided into four distinct circuits. At F street the line is cut, and each track is made separate both north and south of F street. Below F street the conductor rails are used alone. Above F street the cables are tapped into the conductor rails about every 800 feet.

No final estimates having been made, it is impossible to give actual figures of cost, but the cost per mile of single track (of straight track), based on actual contract figures, is herewith given:

Wheel rails, slot rails, and joints .....	\$6,468.00
Conductor rails .....	1,267.20
Bolts, nuts, washers, liners, tie-rods, etc .....	792.00
Yokes, manhole frames, covers, and all cast iron .....	5,068.00
Insulators .....	261.00
Malleable iron clips .....	264.00
Bonds, finished (single bonding) .....	227.40
Excavation .....	2,376.00
First-class concrete for tube .....	5,068.80
Second-class concrete for paving base .....	3,062.40
Track laying, hauling, and temporary track .....	2,455.20
Asphalt paving in, halfway between, and 2 feet outside of tracks .....	7,497.60

Total ..... 34,811.40

Where block paving is taken up in existing tracks and relaid, this price is reduced to \$29,832. These figures are for a straight, single-track mile, complete, but they include nothing for laying ducts, drains, subsurface obstructions, special track work, or any extras.

The power station located at Four-and-a-half and P streets SW. contains three nominal 400-horsepower tandem compound condensing Greene engines, made by the Providence Steam Engine Company, directly connected to 300-K. W. generators, made by the General Electric Company. The engine speed is slightly reduced to lower the voltage from that of the ordinary overhead plants 50 volts, i. e., the voltage is 450 at no load compounded to 500 at normal load. Water for condensing purposes is taken directly from the river by a 10-inch pipe, and overflow from condenser is 14-inch pipe.

*Equipment.*—Twenty-five motors, 25 open trailers, 25 closed. Twenty trains kept on street, headway between two and three minutes.

#### ROCK CREEK PARK.

The board of control of Rock Creek Park, consisting of the Chief of Engineers United States Army and the Commissioners of the District of Columbia, assumed control of the park January 1, 1895. The Commissioners directed the superintendent of police to detail one mounted police officer to take charge of the park under the orders of the secretary. Private J. T. Morgan was so detailed, and has performed the difficult duty of policing this extensive area to the complete satisfaction of the board of control.

Many of the old cabins which had hitherto been left standing were destroyed and removed under his supervision, without cost to the District. A few of the places have been rented to responsible parties, under authority of Congress.

#### SPECIAL REPORTS.

In pursuance to orders, on October 27, 1894, an inspection was made of the Mekarski compressed-air motor at Westfield, Mass. The motor examined is of about 8 tons weight, 16½ feet in length, inside measurement, and 23 feet over all. The compressed air is stored in tanks under the car body, from which it is passed through reducing valves into a tank containing hot water, and from there to the engine cylinders. The total capacity of the air tanks is about 89 cubic feet, and of the water tanks 28 gallons. The engine is placed in rear of and connected with the rear wheels of each car only; arrangements are made for connecting the rear and front wheels, if deemed necessary. The diameter of cylinder is 5¼ inches and the stroke 9 inches; the diameter of the car wheels, 27 inches. The hot-water tank is a vertical cylinder placed upon the front platform.

The mode of operating is as follows: The car is brought to the power house, where the air tanks are connected with a Rand compressor and in about fifteen minutes charged to pressure of about 650 pounds. At the same time the water in the tank is heated by steam to about 320°. The car being charged, the motorman, by means of valves, lets the air into the hot-water tank and then into the cylinders, and controls his engine as he would if he were running with steam. The brake is also worked by compressed air.

At the time of my visit, three of these cars were in operation upon a line 2 miles long. The motors were charged at the end of each run of 4 miles, though I was informed that by careful operating they could make a double run with a single charge at 750 pounds pressure.

The track is an ordinary street railway track in fair repair, generally level, but with one short grade of perhaps 4 per cent. The ordinary pressure in the cylinders when running being from 100 to 200 pounds,

the available pressure is the excess of this. The cars which were examined were running on their regular schedule time, so no record of speed was attempted.

It might be added that this motor is a French invention, which has been introduced into this country by Mr. James F. Lewis, of the Rand Drill Company, to whom I am indebted for the privileges granted me.

Upon February 21, 1895, an examination was made of the Hardie compressed-air motor at Rome, N. Y. The motor examined is of about 8½ tons weight, and is of the size of the Broadway, New York, or Columbia railroad cable car. The compressed air is stored in cylindrical cases of steel, "Mannesmann bottles," from which it passes through reducing valves into a hot-water tank placed under the body of the car. From this tank it passes through tubes to the valves located upon each of the platforms and thence to the engines. The operating mechanism occupies less space on the platform than that of the ordinary electric motor. The engines are placed under the car and are connected with all four wheels. The diameter of each cylinder is 6 inches, and the stroke 14 inches; the diameter of the wheel is 26 inches. The hot-water tank contains about 87 gallons and the air tanks 35 cubic feet. An experimental trip was made with this motor on the tracks of the New York Central Railroad east of Rome. The following gives the details of the trip:

## FIRST TRIP.

Place.	Time.	Difference.	Pressure in tank (pounds per square inch).	Loss.	Gauge.	Temperature of water.
Started.....	3. 15	.....	2,025	.....	.....	F.
First milepost.....	3. 18	3	1,950	.....	180	330
Second milepost.....	3. 20½	2½	1,875	75	.....	.....
Third milepost.....	3. 23½	3½	1,800	75	.....	.....
Fourth milepost.....	3. 26½	2½	1,750	50	150	.....
Fifth milepost.....	3. 31	4½	1,625	125	150	.....
Sixth milepost.....	3. 34	3	1,510	115	120	.....

## RETURN TRIP.

Sixth milepost.....	3. 35	.....	1,510	.....	170	.....
Fifth milepost.....	3. 39	4	1,360	150	.....	.....
Fourth milepost.....	3. 42	3	1,240	120	120	.....
Fourth milepost.....	3. 43	.....	1,240	.....	.....	.....
Third milepost.....	3. 48	5	1,060	180	120	.....
Second milepost.....	3. 52	4	870	190	.....	.....
First milepost.....	3. 56	4	660	210	140	177

<sup>1</sup>Stopped one minute.

Not the slightest difficulty was experienced in starting or stopping the car or regulating its speed.

This table indicates that between the ranges of pressure, 2,025 and 200, the car could be run on the same track a distance of 13 miles, under conditions similar to those existing at the time. The car carried twenty-six passengers; the trip was made in a snowstorm, but upon a nearly level track in fine condition. If the capacity of the air tanks were doubled, or contained 70 cubic feet, with the same initial pressure the distance would be doubled.

Among the passengers were Gen. Herman Haupt, consulting engineer of the company, and Mr. Hardie, the inventor of the motor, to whom I am indebted for the privilege of examining this motor.



It is learned from one of the current engineer journals that a trial of this compressed-air motor will be made upon the Ninth avenue line, New York City.

#### FENDERS.

Upon November 25, 1894, an order was received to investigate the subject of fenders for the street cars in Washington operated other than by horsepower. A report was submitted December 22, 1894, recommending a front and a wheel-guard fender, and naming the Blakistone front and the Blakistone, Brightwood, and Smith wheel guards as suitable for the purpose.

Regulations requiring the railway companies, within a reasonable time, to equip their cars with the fenders named or others which might be afterwards approved by the Commissioners were drawn up, submitted to the attorney, and finally adopted. Since that time the Claude front and wheel-guard fenders and Parmenter wheel guard have likewise been approved.

Most of the cars in the city are now equipped with the Blakistone or Claude front fender, and the Blakistone, Claude, or Brightwood wheel guard.

Since the fenders have been attached to the cars three children have been picked up without injury by the front fender; in one case the car was running at a rate of 12 miles an hour. No person has yet been picked up by the wheel guard, but I have been informed by the officers of three companies that they have picked up several dogs without injuring them at all. In one case the speed was estimated at over 15 miles an hour.

Respectfully submitted.

G. J. FIEBEGGER,

*Captain, Corps of Engineers, U. S. A.*

Maj. CHARLES F. POWELL,

*Corps of Engineers, U. S. A., Engineer Commissioner, D. C.*

*Inspectors, foremen, assistant engineers, and other employees temporarily required on surface work, showing appropriations from which paid, for year ended June 30, 1895.*

Class.	Number.	Assessment and permit work.	Current repairs to streets, avenues, and alleys.	Repairs to sidewalks and curbs.	Repairs to concrete pavements.	Improvement and repairs, streets and avenues.	Constructing county roads.	Current repairs to county roads.
Inspectors.....	21	\$344.00	\$112.00	\$0.39	\$4,854.00	\$2,771.00	\$881.25	.....
Foremen.....	16	1,834.53	1,836.00	176.00	94.00	74.32	1,007.12	\$2,678.50
Assistant engineers ..	2	856.00	.....	.....	.....	.....	1,130.77	.....
Other employees.....	669	13,833.16	11,671.00	921.42	638.79	3,696.75	10,785.15	18,461.56
Total .....	.....	16,867.69	13,619.00	1,097.42	5,586.79	6,542.07	13,804.29	21,140.06

Class.	Number.	Construction and repairs to bridges.	Ordinary care of bridges.	Parking commission.	Smallpox hospital.	Various deposits.	Plumbers' assessment fund.	Total.
Inspectors.....	21	.....	.....	.....	.....	.....	.....	\$8,962.25
Foremen.....	16	.....	.....	\$1,693.55	\$30.00	\$122.56	.....	9,546.58
Assistant engineers ..	2	\$175.00	\$781.02	.....	.....	.....	.....	2,942.79
Other employees.....	669	3,065.34	176.12	7,971.16	229.50	422.26	\$1,008.00	72,880.21
Total .....	.....	3,240.34	957.14	9,664.71	259.50	544.82	1,008.00	94,331.83



		Schedule of street improvement work.		
		NORTHWEST.		
Street.	From—	Straight curb reset.	Circular curb reset.	S. c.
		Linear feet.	Linear feet.	
V .....	Thirteenth .....	200.75	22.50	
Fifteenth .....	U .....	3.20		
Tenth .....	T .....	99.50		
First .....	K .....	B. S. 90.90	37.30	B
K .....	First .....	1,429.55		
T .....	Fourteenth .....	50.10	41.50	I
Oregon avenue .....	New Hampshire avenue .....	202.10		
Connecticut avenue .....	North and south curb .....			
		SOUTHWEST.		
Canal .....	B .....	643.39		
Eighth .....	E .....	1,668.26		
Third .....	F .....	397.98		
		SOUTHEAST.		
Eighth .....	East Capitol .....	1,138.38		
D .....	Ninth .....	3,301.53		
Twelfth .....	Lincoln Park .....			
First .....	D .....			
E .....	South Capitol .....			
		NORTHEAST.		
Fifteenth .....	East Capitol .....			
C .....	Twelfth .....			
Fourth .....	H .....	1,580.31		
Massachusetts avenue .....	Second .....	1,421.24		
North side Lincoln Square .....		865.40		
Twelfth .....	Lincoln Square .....	912.38		
		GEORGETOWN.		
Prospect .....	Thirty-sixth .....			
Valley .....	U .....			
High (Thirty-second) .....	M .....	848.90		
		SUBURBAN.		
Fourteenth .....	Kenyon .....			
Entrance to Zoological Park .....				
Road from Broad Branch road to Chevy Chase Circle .....				
M N E .....	Twelfth street .....			
Pennsylvania avenue extended .....				
Eighteenth street extended .....	Florida avenue .....	3,971.85	137.65	
Twelfth street extended, Brookland .....				
North Capitol street extended .....				
Sherman avenue, Sixteenth street extended. <sup>12</sup> .....				

<sup>12</sup> By order of Commissioners (672 E. D., 1895). Few; balance relaid, incomplete.

## REPORT OF THE COMPUTING ENGINEER.

WASHINGTON, *August 1, 1895.*

I have the honor to submit the following as the operations of this office for  
ended June 30, 1895:

e A gives a detailed statement of the cost of paving and improving roadways  
ity and in the county under the appropriations for "Improvements and repairs"  
onstruction of county roads."

e B gives a detailed statement of the expenditures under the appropriation repairs to concrete pavements."

e C gives a detailed statement of work done for railway companies.

dition to the above special work, grades were furnished the street railways, s, and wherever required by the other departments of the District service. ectfully submitted.

**GEO. H. BAILEY,**  
*Computing Engineer.*

**ENGINEER COMMISSIONER.**

**Through Capt. G. J. Fiebeger.)**

TABLE B.—*Repairs to concrete pavements, 1895.*

[Contractor, H. L. Cranford.]

Locality.	Year laid.	Square yards.	Contract work.	Extra work.	Total cost.
t NW., between Sixteenth street and Island avenue.	1873	4, 531. 17	\$8, 671. 64	\$756. 31	\$9, 427. 95
reet NW., between F and G streets.	1885	359. 72	1, 182. 11	106. 08	1, 274. 04
th street NW., between Massachusetts and P street.	1873	977. 64	2, 144. 56	107. 50	2, 252. 06
th street NW. (west side), between New avenue and H street.	1874	245. 91	530. 58	1. 48	532. 06
t NW., between Seventh and Ninth streets.	1873	1, 901. 81	4, 902. 14	280. 29	5, 182. 43
rk avenue NW., between Ninth and streets.	1872	3, 634. 58	7, 077. 24	317. 96	7, 370. 71
tion Twenty-sixth and M streets NW.	1877	754. 14	1, 183. 94	-----	1, 183. 94
rk avenue NW., between Fourteenth and th streets.	1872	1, 243. 93	2, 506. 43	493. 81	3, 000. 24
lent avenue NW., between S street and side Florida avenue.	1873	320. 05	975. 97	24. 00	999. 97
th street NW., between Dupont Circle street.	1873	792. 61	1, 878. 06	132. 93	2, 010. 99
th street NW. (west side), between K streets.	1879	354. 85	642. 92	-----	642. 92
NW., between Thirteenth and Four streets.	1874	2, 519. 89	5, 379. 82	326. 12	5, 705. 94
NW., between Fourteenth and Fifteenth streets.	1875	2, 143. 04	3, 386. 02	204. 62	3, 590. 64
NW., between Sixteenth and Seventeenth streets.	1874	5, 081. 82	8, 821. 80	500. 54	9, 322. 84
NW., between Sixth and Seventh streets.	1879	2, 285. 58	4, 639. 19	368. 97	5, 008. 16
lent avenue NW., between H and I streets.	1873	2, 046. 19	3, 487. 15	2. 33	3, 489. 48
raey avenue (portions), M to N, N to O, to Q street.	1884 1887	6, 727. 31	7, 519. 32	-----	7, 519. 32
ussets avenue NW., between Sixteenth and Dupont Circle.	1873	9, 467. 50	16, 390. 47	264. 55	16, 655. 02
land avenue, between Connecticut and Seventeenth street.	1873	4, 700. 89	8, 656. 14	41. 27	8, 697. 41
NW., between Sixteenth and Seventeenth streets.	1875	1, 890. 10	3, 240. 53	15. 84	3, 256. 37
vania avenue, intersection Tenth street.	1885	1, 020. 22	1, 599. 20	-----	1, 599. 20
NW., between Eighteenth street and t Circle.	1873	522. 13	958. 32	65. 14	1, 023. 46
ninth street (Georgetown), between N umbarton streets.	1883	922. 96	1, 595. 91	-----	1, 595. 91
outh and west of Treasury building.	-----	999. 72	7, 621. 01	179. 91	7, 800. 92
NW., between Fourth and Fifth streets.	-----	357. 95	905. 51	21. 38	926. 89
t NW., between Sixth and Seventh streets.	-----	-----	-----	-----	*122. 86
one under contract No. 1772, at \$1.14 per square yard	-----	-----	-----	-----	110, 191. 23
streets, 1,296,3649 cubic yards, at \$17.50	-----	-----	-----	-----	429, 372. 42
on	-----	-----	-----	-----	6, 730. 80
to tools, etc.	-----	-----	-----	-----	49. 90
	-----	-----	-----	-----	3, 650. 01
tal.	-----	-----	-----	-----	*149, 994. 36

deduct \$18.15 for material.

<sup>2</sup> Deduct \$24.49 for material.

<sup>2</sup> Sidewalks.

\* Minor repairs; includes base, binder, cutting out, etc.

<sup>b</sup> Appropriation, \$150,000.

TABLE C.—Work done at cost of railroad companies, 1895.

Company.	Locality.	Cubic yards.	Square yards.	Total cost.
Eckington and Soldiers' Home R. R. Co.	G street NW., Fourth to Fifteenth street.	43.36	323.38	\$1,887.52
	Fifth street, F street to New York avenue.	17.58	225.37	1,346.00
	First and D streets NW.	2.57		63.76
	New Jersey avenue and G street NW.	1.65		39.81
	NW. corner North Capitol and G streets.	1.23		30.46
	Fifth and H streets NW.	.70		17.22
	Ninth street, E to F street.	.62		15.31
	First and T streets.	5.95		8.40
	I street, Second to Fifth street.	2.18		59.54
	C street NE., Twelfth street to Tennessee avenue.			179.04
	Total .....			3,647.11
Metropolitan R. R. Co.	Twenty-ninth street, N to Dumbarton street.		16.69	19.03
	Ninth street NW., Pennsylvania avenue to F street.	1.40		33.42
	First street NE., B to East Capitol street.	.54		13.33
	F street NW. (south side), Twelfth to Thirteenth street.	.36		7.52
	Fourteenth and F streets.	.27		6.59
	F street, Sixth to Seventh street NW.	.89		21.91
	Fourteenth street and New York avenue (east side).	1.18		32.31
	H street NW., Fifteenth street to Vermont avenue.	1.60		34.12
	H street SW., near Four-and-a-half street.	.18		4.45
	East Capitol street (south side), First to Fourth street.	2.26		54.24
	Connecticut avenue, S street to Florida avenue.		45.59	143.59
	Total .....			370.51
Anacostia and Potomac R. R. Co.	Ninth and G streets.	.07		1.22
	Canal street, B to C street SW.		139.49	335.59
	First and C streets SW.	.20		4.94
	Second street SW., C street to Virginia avenue.	.20		4.94
	Second and Canal streets SW.	.04		.92
	Third street SW., Maine to Missouri avenue.	.35		.49
	Total .....			348.10
Belt Line.	Eleventh and H streets NW.	.20		4.87
	Eleventh street and Massachusetts avenue.	.81		14.18
	First and E streets NW.	.09		2.22
	Fourth street, G street to New York avenue.	8.48		13.62
	Fourteenth street, Pennsylvania avenue to B street.	1.98		48.61
	G street NW., New Jersey avenue to Fourth street.	4.10		122.17
	New Jersey avenue, O to P street.	.03		.75
	O street, Fourth to Eleventh street.	12.20		103.24
	B street SW., Twelfth to Fourteenth street.	20.18		498.73
	Eleventh street NW., corner E street.	1.11		37.55
	Fourteenth street and Pennsylvania avenue NW.	.70		17.29
	New Jersey avenue, between F and G streets.	1.75		2.47
	Total .....			865.70
Columbia R. R. Co.	Fifth street and Massachusetts avenue NW.	10.33		76.94
	Front No. 1321 New York avenue.	.18		4.37
	New York avenue, Ninth to Tenth street.		174.21	707.52
	K street, Seventh to Ninth street.		121.74	321.67
	H street NE., First to Fifteenth street.		149.75	201.06
	K street, First street to Delaware avenue, Seventh to Fifteenth street.		892.01	918.77
	Total .....			2,230.32

TABLE C.—*Work done at cost of railroad companies, 1895—Continued.*

Company.	Locality.	Cubic yards.	Square yards.	Total cost.
Washington and Georgetown R. R. Co.	Kenyon and Whitney avenues.....	.....	3. 16	\$5. 81
	Fourteenth street, widening and improving.	.....	485. 61	2, 117. 87
	Twenty-sixth and M streets.....	.....	43. 17	66. 85
	New York avenue, Fourteenth to Fifteenth street.	.....	121. 26	196. 41
	Fourteenth street, New Hampshire avenue to H street.	.....	23. 40	83. 88
	Total .....	.....	.....	2, 420. 82
Rock Creek R. R. Co.....	Florida avenue and U street, Seventh to Eighteenth street.	9. 23	.....	287. 78
	Eighteenth and R streets.....	.....	322. 90	533. 54
	Total .....	.....	.....	821. 32
Georgetown and Tennallytown R. R. Co.	Thirty-second street, M to N street .....	.....	201. 20	187. 74

TABLE D.—*Statement of character and area of street pavements July 1, 1895.*

[Square yards.]

Locality.	Asphalt.	Coal tar and concrete.	Granite.	Macadam.	Asphalt block.	Vitrified brick.	Cobble.	Unimproved.	Total.
Northwest .....	1, 250, 068	425, 861	197, 300	79, 950	37, 915	6, 885	141, 586	237, 249	2, 374, 814
Southwest .....	96, 817	32, 251	237, 587	21, 325	13, 490	.....	90, 713	234, 867	726, 050
Southeast .....	115, 602	3, 154	44, 619	110, 168	112, 879	.....	48, 576	495, 108	930, 106
Northeast .....	158, 186	15, 894	19, 311	35, 753	123, 545	.....	1, 738	570, 551	924, 978
Georgetown .....	85, 603	25, 523	77, 543	9, 790	5, 445	.....	26, 480	57, 080	287, 464
Total ...	1, 706, 276	502, 683	575, 360	254, 986	293, 274	6, 885	309, 093	1, 594, 855	5, 243, 412

## RECAPITULATION.

Asphalt .....	1, 706, 276	Vitrified brick .....	6, 885
Coal and concrete .....	502, 683	Cobble .....	309, 093
Granite .....	575, 360	Unimproved .....	1, 594, 855
Macadam .....	254, 986		
Asphalt block .....	293, 274	Total .....	5, 243, 412

TABLE E.—Table showing mileage of street pavements, July 1, 1895.

Locality.	Asphalt.		Coal tar.		Granite.		Cobble.		Macadam.	
	<i>Linear feet.</i>	<i>Miles.</i>	<i>Linear feet.</i>	<i>Miles.</i>	<i>Linear feet.</i>	<i>Miles.</i>	<i>Linear feet.</i>	<i>Miles.</i>	<i>Linear feet.</i>	<i>Miles.</i>
Northwest.....	275,065	52.09	105,281	19.94	48,725	9.26	29,521	5.59	16,770	3.17
Southwest.....	22,937	4.34	8,760	1.66	58,170	11.01	20,750	3.97	3,310	.63
Southeast.....	32,077	6.07	870	.16	16,310	3.09	16,335	3.10	32,170	6.09
Northeast.....	41,656	7.89	2,940	.57	4,300	.80	780	.14	7,350	1.41
Georgetown.....	23,361	4.43	7,680	1.45	23,456	4.44	8,810	1.64	300	.06
Total.....	395,096	74.81	125,531	23.77	150,961	28.60	76,196	14.44	59,900	11.35
Suburban.....	23,619	4.47	.....	.....	4,490	.85	.....	.....	24,930	4.72

Locality.	Asphalt block.		Vitrified brick.		Unimproved.		Total.	
	<i>Linear feet.</i>	<i>Miles.</i>	<i>Linear feet.</i>	<i>Miles.</i>	<i>Linear feet.</i>	<i>Miles.</i>	<i>Linear feet.</i>	<i>Miles.</i>
Northwest.....	9,585	1.81	1,081	0.20	59,070	11.19	545,098	103.24
Southwest.....	3,650	.69	.....	.....	52,403	9.92	169,980	32.23
Southeast.....	28,470	5.39	.....	.....	133,594	25.30	259,826	49.20
Northeast.....	26,550	4.84	.....	.....	149,081	28.35	253,267	48.97
Georgetown.....	2,790	.52	.....	.....	18,205	3.45	84,602	16.99
Total.....	70,045	13.25	1,081	.20	412,963	78.21	1,291,773	244.63
Suburban.....	300	.06	.....	.....	.....	.....	53,389	10.10

TABLE F.—Statement of character and extent of street pavements July 1, 1895.

## NORTHWEST.

Locality.	Carriageway.										Resurfaced; originally paved with—
	Length.	Width.	Asphalt.	Coal tar and concrete.	Granite.	Cobble and blue rock.	Macadam.	Asphalt block.	Unimproved.	Year paved.	Year resurfaced.
North Capitol street from B (west side) to C.....	Feet. 480	50	1,385		Sq. yds. 1,385	Sq. yds. 1,385	Sq. yds. 1,385	Sq. yds. 1,385	Sq. yds. 1,385	1883	
North Capitol street from C (west side) to D.....	400	50							1,050		
North Capitol street from D (west side) to E.....	400	50			1,196					1893	
North Capitol street from E (west side) to Massachusetts avenue.....	540	50		1,928						1889	
North Capitol street from Massachusetts avenue (west side) to I street.....	1,390	50	3,728							1887	
North Capitol street from I (west side) to K.....	440	50	1,443							1889	
North Capitol street from K (west side) to M.....	1,130	50	3,103							1892	
North Capitol street from M (west side) to New York avenue.....	500	50	1,103							1893	
North Capitol street from New York avenue (west side) to O street.....	445	50	832							1893	
North Capitol street from O to Florida avenue.....	720	50									
Arthur street, between New Jersey avenue and First, B and C streets.....	470	25						1,223		1886	
First street, from center of Botanical Garden to Pennsylvania avenue.....	440		2,270					1,366		1883	
First street, from Pennsylvania avenue to F street.....	2,240	56 }								1892 }	
First street, from F to H.....	620	32			7,215			590		1879 }	
First street, from H to Defrees.....	170	32		700	1,427					1882 }	
First street, from Defrees to I.....	150	32			535					1877 }	
First street, from I to K.....	390	32	1,191							1882 }	
First street, from K to Pierce.....	686	32	3,051							1890 }	
First street, from Pierce to Florida avenue.....	2,504	32							8,949	1894 }	
Second street, from Pennsylvania avenue to Indiana avenue.....	860	40			3,693					1891 }	
Second street, from Indiana avenue to I street.....	2,900	40	10,452							1891 }	
Kirby street, between First and Third, M and N.....	480	32							1,760		
Third street, from Center of Botanical Garden to Pennsylvania avenue.....	500					2,230				1891 }	

1 Vitrified brick.



TABLE F.—Statement of character and extent of street pavements July 1, 1895—Continued.  
NORTHWEST—Continued.

Locality.	Carriageway.										Resurfaced: originally paved with—
	Length.	Width.	Asphalt.	Coal tar and concrete.	Granite.	Cobble and blue rock.	Macadam.	Asphalt block.	Unimproved.	Year paved.	Year resurfaced.
Third street, from Pennsylvania avenue to D street.	Feet. 1, 130	32	Sq. yds. 436	Sq. yds. 4, 231				Sq. yds.	Sq. yds.	1880	Coal tar. { 1882 } { 1884 }
Third street, from intersection of D.	32	32								1880	
Third street, from Indiana avenue to L street.	3, 260	40	16, 359							1875	
Third street, from Indiana avenue to New York avenue.	500	40	2, 685							1875	
Third street, from New York avenue to P street.	950	35	4, 177							1893	Do. { 1878 } { 1889 } { 1891 }
Third street, from P to Florida avenue.	1, 207	35							4, 706		
Fourth street, from Indiana avenue to New York avenue.	3, 610	32	3, 573	10, 719						1872	
Fourth street, from New York avenue to M street.	230	32				647				1873	
Fourth street, from M to New York avenue.	1, 170				2, 401					1891	Do. { 1885 } { 1873 } { 1873 }
Fourth street, from New Jersey avenue to Florida avenue.	1, 530	30	5, 584							1891	
Fourth-and-a-half street, from center of Mall to Pennsylvania avenue.	720	55		1, 143						1886	
Fourth-and-a-half street, from Pennsylvania avenue to D street.	760	50						4, 549		1889	
Fifth street, from D to G.	1, 240	46	3, 341							1885	Do. { 1884 } { 1873 } { 1873 }
Fifth street, from G to New York avenue.	930	32		7, 389						1873	
Fifth street, from New York avenue to O street.	1, 620	32	5, 668							1879	
Fifth street, from O to Q.	850	32	3, 123							1889	
Fifth street, from Q to Florida avenue.	1, 360	32	4, 436							1889	Do. { 1885 } { 1877 } { 1889 }
Sixth street, from center of Mall to Missouri avenue.	670	60				3, 333				1885	
Sixth street, from Missouri avenue to Louisiana avenue.	850	60	5, 078							1877	
Sixth street, from Louisiana avenue to E street.	550	32	2, 196							1878	
Sixth street, from E to F.	550	32	1, 313							1889	Do. { 1887 } { 1889 } { 1889 }
Sixth street, from F to G.	470	32			975					1880	
Sixth street, from G to New York avenue.	250	32		6, 806						1887	
Sixth street, from G to New York avenue.	1, 790	{ 32 } 35								1880	
Sixth street, from New York avenue to Florida avenue.	4, 240	35	16, 636							1889	Do. { 1889 } { 1889 }
Madison street, between Sixth and Seventh, M and N.	540	25	1, 538							1889	
Marion street, between Sixth and Seventh, P and R.	1, 010	26	2, 861							1889	

Wilberger street, between Sixth and Seventh, S and T. Seventh street, from center of Mall to Pennsylvania avenue.	500 11,500	29 51	1,730	1878	
Seventh street, from Pennsylvania avenue to D street.	450	51	1,579	1879	
Seventh street, from D to Q.	5,870	49	3,214	1879	
Seventh street, from Q to Florida avenue.	51		18,465	1882	Granite (west side).
Seventh street, from Q to Florida avenue.	1,960	51	3,916	1889	Granite (east side).
Seventh street, from intersection of E to Q.	700	51	5,397	1877	
Eighth street, from Pennsylvania avenue to E street.	330	51	3,653	1881	Coal tar.
Eighth street, from E to F.	1,650	30	1,964	1877	
Eighth street, from G to L.	1,070	30	4,880	1883	Do.
Eighth street, from L to N.	1,940	30	3,610	1875	
Eighth street, from N to R.	530	30	6,483	1883	
Eighth street, from R to S.	920	30	2,063	1887	
Eighth street, from S to Florida avenue.	500	51	3,624	1888	
Ninth street, from B to Pennsylvania avenue.	5,610	51	2,260	1879	
Ninth street, from Pennsylvania avenue to P street.	670	51	23,113	1892	Do.
Ninth street, from P to Rhode Island avenue.	3,000	51	4,250	1885	
Ninth street, from Rhode Island avenue to Florida avenue.	3,000	51	1,583	1886	
Ninth street, from P to Florida avenue.	480	51	3,371	1884	
Columbia street, between Ninth and Tenth, Q and O.	480	51	6,147	1875	
Opera Square, between Ninth and Tenth streets, Penn- sylvania avenue and Louisiana avenue.	740	51	2,683	1873	
Tenth street, from B to Pennsylvania avenue.	580	32	784		
Tenth street, from Pennsylvania avenue to E street.	380	32	3,103	1872	
Tenth street, from E to F.	300	32	1,353	1885	
Tenth street, from F to G.	1,200	32	1,373	1879	
Tenth street, from G to K.	960	32	955	1880	
Tenth street, from K to M.	1,020	32	4,828	1875	Do.
Tenth street, from M to O.	1,420	32	3,368	1890	
Tenth street, from O to R.	530	32	3,443	1881	
Tenth street, from R to S.	500	32	4,433	1883	
Tenth street, from S to T.	520	32	1,992	1887	
Tenth street, from T to U.	980	32	1,948	1891	
Tenth street, from U to Florida avenue.	500	55	2,588	1895	
Eleventh street, from B to Pennsylvania avenue.	430	55	3,145	1872	
Eleventh street, from Pennsylvania avenue to E street.	362	55	2,500	1878	
Eleventh street, from E to F.	266	55	1,734	1879	
Eleventh street, from F to G.	1,330	55	1,214	1880	
Eleventh street, from G to K.	1,190	35	3,866	1875	
Eleventh street, from K to O.	4,000	35	4,326	1890	
Twelfth street, from center of Mall to B street.	850	40	8,734	1891	
Twelfth street, from B to Pennsylvania avenue.	320	38	3,735	1873	
Twelfth street, from Pennsylvania avenue to E street.	420	38	3,900	1872	
Twelfth street, from E to F.			1,292	1878	Asphalt.
			1,629	1879	

TABLE F.—Statement of character and extent of street pavements July 1, 1895—Continued.

NORTHWEST—Continued.

Locality.	Length.	Width.	Carriageway.	Asphalt.	Coal tar and concrete.	Granite.	Cobble and blue rock.	Macadam.	Asphalt block.	Unimproved.	Year paved.	Year resurfaced.	Resurfaced: originally paved with—
			Feet.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.		
Twelfth street, from F to N	340 3,330	32		1,200	11,839						1875	1884 1889	Coal tar.
Twelfth street, from intersection of G			198								1881		
Twelfth street, from N to O	430	32	1,522								1881		
Twelfth street, from O to Rhode Island avenue.	530	32	1,859								1883		
Twelfth street, from Rhode Island avenue to Vermont avenue.	660	32		2,304							1887		
Twelfth street, from Vermont avenue to S street	500	32	1,798								1888		
Twelfth street, from S to Y	1,460	32	5,377								1890		
Twelfth street, from V to Florida avenue.	900	32	3,554								1891		
Cleveland street, between Twelfth and Thirteenth, W and Florida avenue.	540	25							1,297		1886		
Thirteenth street, from B to C	400	40	1,760								1878	1893	Asphalt.
Thirteenth street, from C to Pennsylvania avenue.	700	40	3,037								1875	1887	Do.
Thirteenth street, from Pennsylvania avenue to E street	150	40		676							1878		
Thirteenth street, from E to F	400	40			1,741						1879		
Thirteenth street, from F to P	4,150	32		15,682							1873	1888 1889	Coal tar.
Thirteenth street, from P to Corcoran	600	32	2,126								1881		Do.
Thirteenth street, around Iowa circle.	1,313	32	8,838								1873	1885	
Thirteenth street, from Corcoran to T	1,310	32	4,273								1884		
Thirteenth street, from T to Florida avenue.	1,890	32	7,271								1891		
Thirteenth street, from intersection of N	32	32	613								1879		
Thirteenth street, from intersection of B	32	32	775								1879		
Kingman Place, between Thirteenth and Fourteenth, P and Q streets.	500	30	1,699								1889		
Thirteenth-and-a-half street, from B street N. to Pennsylvania avenue.	1,300	35					5,095				1872		
Fourteenth street, from center of Mall to B street N.	775	40		8,852		3,920					1873	1894	
Fourteenth street, from B street N. to Pennsylvania avenue.	1,340	70									1887		
Fourteenth street, from Pennsylvania avenue to F street.	320	70				1,734					1884		Do.
Fourteenth street, from F to New York avenue.	660	70	3,732								1873	1894	

Fourteenth street, from New York avenue to H.	270	1,549				1874	1881	Do.
Fourteenth street, from H to Florida avenue.		28,086				1879	{1882 1883 1884 1885}	Asphalt (east side).
Fourteenth street, from H to M.	1,800	5,682				1879	{1882 1883 1884 1885}	Asphalt (west side).
Fourteenth street, from M to Florida avenue.	5,060	14,533				1880	.....	
Johnson street, from Fourteenth (R and S) to Fifteenth.	500	1,446				1889	.....	
Porter street, between Fourteenth and Fifteenth, W and V.	370				1,025	1888	.....	
Fifteenth street, from B to Pennsylvania avenue.	1,530	43	772			1883	1884	Asphalt block.
Fifteenth street, from Pennsylvania avenue to New York avenue.	900	70	4,938		1,020	1872	{1881 1878 1883 1879}	Coal tar.
Fifteenth street, from New York avenue to Vermont avenue.	1,250	{40 50}	7,005			1873	{1883 1884 1885}	Do.
Fifteenth street, from I to K.	300	40	1,724			1873	1880	Do.
Fifteenth street, from K to Rhode Island avenue.	1,850	32	6,921			1881	{1887 1891}	Do.
Fifteenth street, from Rhode Island avenue to S street.	2,200	32	3,296	4,420		1875	{1887 1891}	Do.
Fifteenth street, from S to U.	1,100	32	3,788			1885	.....	
Fifteenth street, from U to V.	450	32	1,546			1885	.....	
Fifteenth street, from V to Florida avenue.	450				1,260	1889	1884	
Executive avenue, south and west to Treasury Department.	1,195		5,601					
Fifteen-and-a-half street, from Pennsylvania avenue to H street.	465	40	2,974			1872	1880	Do.
Sixteen street, from H to Scott Circle.	2,250	50	12,450			1881	.....	
Sixteen street, from Scott Circle to R street.	1,745	50	10,818			1882	.....	
Sixteen street, from R to Florida avenue.	2,065	50	13,391			1883	.....	
Sixteen-and-a-half street, from Pennsylvania avenue to H street.	465	40	2,315			1872	1880	Do.
Seventeenth street, from B to New York avenue.	1,640	50		9,285		1872	{1884 1880 1886}	Do.
Seventeenth street, from New York avenue to I street.	1,560	50	4,847	4,758		1873	{1884 1886}	Do.
Seventeenth street, from I to Massachusetts avenue.	2,535	{50 32}		10,603		1873	{1884 1878}	Do.
Seventeenth street, from Massachusetts avenue to P street.	580	32	2,095			1875	1884	Do.
Seventeenth street, from P to Q.	500	32				1887	.....	
Seventeenth street, from Q to R.	500	32	1,765			1889	.....	
Seventeenth street, from R to T.	950	32	1,874			1889	.....	
Seventeenth street, from T to Florida avenue.	1,050	32	2,946				4,076	
Eighteenth street, from river to D.	800	32			2,473		.....	
Eighteenth street, from D to E.	360	32	1,544			1892	.....	
Eighteenth street, from E to New York avenue.	200	32	1,096			1873	1878	Do.
Eighteenth street, from New York avenue to Pennsylvania avenue.	1,170	32	4,895			1881	.....	
Eighteenth street, from Pennsylvania avenue to K street.	920	32	4,515			1872	1882	Do.
Eighteenth street, from K to L.	400	32			1,431	1886	.....	

**1 Vitrified brick.**

TABLE F.—Statement of character and extent of street pavements July 1, 1895—Continued.

NORTHWEST.—Continued.

Locality.	Carriageway.										Resurfaced; originally paved with—
	Length.	Width.	Asphalt.	Coal tar and concrete.	Granite.	Cobble and blue rock.	Macadam.	Asphalt block.	Unimproved.	Year paved.	Year resurfaced.
Eighteenth street, from L to P.....	Feet. 1,950	32	2,402	5,182						1873	{ 1879 } 1878
Eighteenth street, from P to Q.....	500	32		1,764						1887	
Eighteenth street, from Q to S.....	850	32	3,130							1891	
Eighteenth street, from S to Florida avenue.....	940	32	3,823							1893	
Nineteenth street, from river to E.....	1,180	32							3,644		
Nineteenth street, from E to New York avenue.....	225	32				1,028					
Nineteenth street, from New York avenue to Pennsylvania avenue.....	1,370	32		6,421						1873	Do.
Nineteenth street, from Pennsylvania avenue to K street.....	655	32			3,170					1880	
Nineteenth street, from K to M.....	1,010	32			3,728					1885	
Nineteenth street, from M to N.....	520	32			1,894					1892	
Nineteenth street, from N to Dupont Circle.....	570	32	2,409							1881	1895
Nineteenth street, from Dupont Circle to Florida avenue.....	2,000	32	2,841	4,757					3,662	1873	{ 1878 } 1891
Twentieth street, from river to E street.....	1,450	32								1873	Do.
Twentieth street, from E to Pennsylvania avenue.....	1,550	32		5,579						1879	Do.
Twentieth street, from Pennsylvania avenue to I street.....	160	32	981							1879	
Twentieth street, from I to K.....	375	32			1,350					1873	{ 1894 } 1890
Twentieth street, from K to P.....	2,425	32	2,995	5,212						1873	{ 1890 } 1890
Twentieth street, from P to Connecticut avenue.....	315	32		2,167						1873	
Twentieth street, from R to S.....	508	32	1,995							1899	
Twentieth street, from S to Florida avenue.....	600	32				900				1872	
Hopkins street, between Twentieth and Twenty-first, O and P.....	350	32	949							1893	
Twenty-first street, from river to E street.....	1,500	32							3,662		
Twenty-first street, from E to Pennsylvania avenue.....	1,880	32		6,101						1873	Do.
Twenty-first street, from Pennsylvania avenue to K street.....	1,380	32			1,394					1875	
Twenty-first street, from K to Q.....	2,770	32	10,892							1875	Do.
Twenty-first street, from Q to Hilyer.....	270	32						1,956		1894	

	250	32	988		187	1880
Twenty-first street, from Hillier to E.	250	32	1,453			187
Twenty-first street, from R to Florida avenue.	430	32			3,758	1880
Twenty-second street, from river to Virginia avenue.	1,565	32				1872
Twenty-second street, from Virginia avenue to F street.	260	32	1,520			1882
Twenty-second street, from F to G.	315	32	1,407			1873
Twenty-second street, from G to Pennsylvania avenue.	1,625	32	4,041			1884
Twenty-second street, from Pennsylvania avenue to M street.	1,000	32	2,832			1885
Twenty-second street, from M to O.	1,150	32	3,894			1890
Twenty-second street, from O to P.	230	32	1,586			1869
Twenty-second street, from P to Florida avenue.	430	32			1,369	
Twenty-third street, from Upper Water to E.	1,670	32			3,413	
Twenty-third street, from E to Virginia avenue.		32			1,778	
Twenty-third street, from Virginia avenue to I street.	1,050	32		4,711		1874
Twenty-third street, from I to Pennsylvania avenue.	400	32	1,425			1891
Twenty-third street, from Pennsylvania avenue to M street.	720	32		2,587		
Twenty-third street, from M to Rock Creek.	950	32			3,699	
Twenty-fourth street, from E to G.	730	32			2,069	1873
Twenty-fourth street, from G to Pennsylvania avenue.	1,376	32	5,192			1873
Twenty-fourth street, from Pennsylvania avenue to M street.	660	32	2,540			1872
Twenty-fourth street, from M to Rock Creek.	1,160	32			3,908	
Twenty-fifth street, from river to Virginia avenue.	1,700	32			5,735	1880
Twenty-fifth street, from Virginia avenue to K street.	1,100	32		2,727		1880
Twenty-fifth street, from K to Pennsylvania avenue.	330	32	1,163			1890
Twenty-fifth street, from Pennsylvania avenue to M street.	530	32	1,693			1890
Twenty-fifth street, from M to Rock Creek.	1,140	32			3,747	
Twenty-sixth street, from river to G street.	1,920	32		2,378	2,599	
Twenty-sixth street, from G to K.	1,400	32		5,042		1874
Twenty-sixth street, from K to Pennsylvania avenue.	470	32	1,680			1882
Twenty-sixth street, from Pennsylvania avenue to M street.	350	32	919			1887
Twenty-sixth street, from M to Rock Creek.	220	32			800	
Twenty-seventh street, from E to L street (R. C.).	750	32			8,651	
Twenty-eighth street, from Rock Creek to K street.	600	35			1,066	
B street, from North Capitol to First.	820	35	3,578			1873
B street, from First to Third.	810	35	5,258			1880
B street, from Sixth to Seventh.	500	56	1,675			1880
B street, from Seventh to Twelfth.	1,690	101		18,686	12,374	1873
B street, from Twelfth to Seventeenth.	3,150	60		23,581		1874
B street, from Seventeenth to Twenty-third.	3,050	60			18,680	
Little B street, from Tenth to Twelfth.	560			567		
C street, from North Capitol to First.	700	{ 46 } 63	3,802			1879
C street, from Second to Third.	450	32	1,201			1882
C street, from Third to Four-and-a-half.	610	30	2,054			1882
C street, from Four-and-a-half to Seventh.	1,020	46	4,058	544		1885

**Permit work.**

TABLE F.—Statement of character and extent of street pavements July 1, 1895.—Continued.

**NORTHWEST—Continued.**

Locality.	Carriageway.										Year resurfaced.	Year paved.	Resurfaced; originally paved with—
	Length.	Width.	Asphalt.	Coal tar and con-crete.	Granite.	Cobble and blue rock.	Macadam.	Asphalt block.	Unimproved.				
	<i>Feet.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>			
G street, from Seventh to Eighth.	250	46			1, 183						1879		
C street, from Ninth to Tenth.	470	40			1, 656						1872		
C street, from Tenth to Fifteenth.	1, 430	40				7, 820					1872		
C street, from Seventeenth to Twenty-third.	3, 000	32							10, 453				
D street, from North Capitol to New Jersey avenue.	1, 470	35	3, 412	406	1, 617						1884		
D street, from North Jersey avenue to Fourth street.	1, 470	36	35								1875	Coal tar.	
D street, from Fifth to Sixth.	1, 110	35	275								1880		
D street, from Sixth to Tenth.	1, 540	36	836		5, 342						1879	Cobble.	
D street, from Tenth to Fifteenth.	1, 360	40				5, 579					1873		
D street, from Fifteenth to Eighteenth.	1, 660	35	2, 788								1891		
D street, from Eighteenth to Twenty-third.	1, 800	32							8, 273				
E street, from North Capitol to New Jersey avenue.	1, 620	35	2, 494								1887	Do.	
E street, from New Jersey avenue to Fourth street.	1, 300	35	4, 832								1879		
E street, from Fifth to Eleventh.	2, 160	35	9, 323								1889 } 1891 }	Asphalt.	
E street, from Eleventh to Thirteenth.	780	40			2, 487						1879		
E street, from Thirteenth to Fourteenth.	300	35						1, 093			1878		
E street, from Pennsylvania avenue to Fifteenth.	1, 000	35	3, 031								1888	Asphalt block.	
E street, from Seventeenth to Nineteenth.	1, 450 } 1, 630 }	35		1, 642		3, 319					1889		
E street, from Nineteenth to Twenty-second.	1, 400	35									1873		
E street, from Twenty-second to river.	2, 050	35				7, 149					{ 1872 } { 1873 }		
F street, from North Capitol to New Jersey avenue.	750	35		2, 962					5, 871				
F street, from New Jersey avenue to Fourth street.	1, 180	35	4, 382								1878	Asphalt.	
F street, from Fifth to Seventh.	800	35	2, 359								1879	Asphalt (south side).	
Do.	760	35		1, 152							1877		
F street, from Seventh to Ninth.	540	51	1, 913								{ 1891 } { 1879 }	Do.	
F street, from Ninth to Twelfth.	1, 160	60	1, 578	4, 257							1877	Coal tar.	
F street, from Twelfth to Thirteenth.	400	60	890	1, 213							1891	Do.	
F street, from Thirteenth to Fifteenth.	1, 080	60	6, 467								1877	Do.	
F street, from Seventeenth to Eighteenth.	630	40	2, 856								1883 } 1892 }	Do.	







	1,570	40	6,084						1879	1886	Asphalt.
M street, from Eighteenth to New Hampshire avenue.	2,125	40	9,171						1882		
M street, from New Hampshire avenue to Rock Creek and Jefferson street, between M and N, Eighteenth and Nineteenth.	450	27									
Ridge street, between M and N, Fourth and Fifth.	760	30	2,518						1879		
Ward place, between New Hampshire avenue and Twenty-second street, M and N.	545	25	1,505						1892		
N street, from North Capitol to New Jersey avenue.	1,900	32	5,642						1893		
N street, from New Jersey avenue to Fifth street.	890	32	3,311						1890		
N street, from Fifth to Ninth.	1,300	32	4,454						1853		
N street, from Ninth to Fourteenth.	2,190	32	6,802						1890		
N street, from Fourteenth to Sixteenth.	910	32	3,249						1881		
N street, from Sixteenth to New Hampshire avenue.	2,245	32	2,781						1873	{ 1884 } { 1878 }	Coal tar.
N street, from New Hampshire avenue to Twenty-first street.	280	32		517					1875		
N street, from Twenty-first to Twenty-second.	620	32	2,081						1893		
N street, from Twenty-second to Twenty-fourth.	710	32	2,196						1892		
N street, from Twenty-fourth to Rock Creek.	810	32							2,384		
Sunderland place, between N and O, Nineteenth and Twentieth streets.	380	30							1885		
Morgan street, between M and N, First and Third.	380	30	1,307						1892		
O street, from North Capitol to New Jersey avenue.	1,830	32									
O street, from New Jersey avenue to Thirteenth street.	3,250	32	4,756	8,905	1,245				1875	1881	Do.
O street, from Thirteenth to Vermont avenue.	1,130	32	481						1883		
O street, from Sixteenth to Sixteenth.	520	32		1,663					1875		
O street, from Sixteenth to Sixteenth.	520	32							1883		
O street, from Sixteenth to Sixteenth.	520	32							1887		
O street, from Sixteenth to Sixteenth.	520	32							1889		
O street, from Sixteenth to Sixteenth.	520	32							693		
P street, from North Capitol to Fourth.	1,970	32	7,135						1891		
P street, from Fourth to Fifth.	2,030	32	5,166						1894		
P street, from Fifth to Sixth.	2,500	32	8,156		500				1884		
P street, from Sixth to Seventh.	1,500	32	8,076						1884		
P street, from Seventh to Eighth.	1,500	32		1,569					1873	1878	Do.
P street, from Eighth to Ninth.	430	32							1879	{ 1887 } { 1881 }	Do.
P street, from Ninth to Tenth.	1,120	40		3,481					1872		
P street, from Tenth to Eleventh.	300	40	1,079						1893		
P street, from Eleventh to Twelfth.	870	25	2,291								
P street, from Twelfth to Thirteenth.	890	24	1,733						1890		
Madison street, between Seventeenth and Eighteenth, P and Q.											
Sampson street, between Fourteenth and Fifteenth, P and Q.	630	30							1,687		
Franklin street, between P and Q, New Jersey avenue and Fifth.	840	25							1,800		
Bates street, between P and Q, North Capitol and First.	1,040	25		2,674							
Madison street, between P and Q, Fifteenth and Seventeenth.											
Q street, from Florida avenue to Third.	1,470	32							6,151		

1 Permit work.

TABLE F.—Statement of character and extent of street pavements July 1, 1895—Continued.

Locality.	Carriageway.								Year resurfaced.
	Length.	Width.	Asphalt.	Coal tar and concrete.	Granite.	Cobble and blue rock.	Macadam.	Asphalt block.	
Q street, from Third to New Jersey avenue.	Feet. 420	32	Sq. yds. 1,812	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Year paved. 1890
Q street, from New Jersey avenue to Fifth	560	32	2,031						1888
Q street, from Fifth to Sixth.	270	32	833						1890
Q street, from Sixth to Rhode Island avenue.	1,460	32		4,759					1887
Q street, from Rhode Island avenue to Vermont avenue.	1,900	32		2,453					1889
Q street, from Vermont avenue to Fourteenth.	850	32	2,806						1883
Q street, from Fourteenth to Sixteenth.	1,250	32	2,338	2,468					{ 1886 1891 } 1874
Q street, from Sixteenth to Seventeenth.	550	32	1,390						1875
Q street, from Seventeenth to Nineteenth.	1,400	32	4,904						1889
Q street, from Nineteenth to Twentieth.	360	32		862					1893
Q street, from Twentieth to Twenty-second.	970	32		2,541					{ 1873 1882 }
Q street, from Twenty-first to Massachusetts avenue.	80			883					1886
Hillyer street, between Q and R, Twentieth and Twenty-first.	470	27					1,552		1875
Warner street, between New Jersey avenue and Fifth, Q and R.	470	25						1,333	1884
Corcoran street, between Thirteenth and Fourteenth, Q and R.	554	30		2,007					1887
Corcoran street, between Fourteenth and Fifteenth, Q and R.	630	30		2,129					1875
Corcoran street, between Fifteenth and New Hampshire avenue, Q and R.	1,820	30	4,851						1898
Corcoran street, between Eighteenth and Nineteenth, Q and R.	470	30	1,163						1890
R street, from Florida avenue to Seventh.	2,410	32	7,551						1890
R street, from Seventh to Ninth.	530	32		1,602					1880
R street, from Ninth to Fourteenth.	2,220	32	7,638						1884
R street, from Fourteenth to Sixteenth.	1,250	32		4,502					1875
R street, from Sixteenth to New Hampshire avenue.	1,140	32	3,918						1890
R street, from New Hampshire avenue to Twentieth street.	1,150	32	3,486						1891

R street, from Twentieth to Twenty-first.	400	32	1,411						1887
R street, from Twenty-first to Florida avenue.	250	32	735						1883
Riggs street, between R and S, to Eleventh and Nineteenth.	450	32					1,300		
Riggs street, between R and S, to Sixteenth and Seventeenth.	500	30							1891
Riggs street, between R and S, to Thirteenth and Fourteenth.	625	30				2,030			1886
French street, between R and S, to Ninth and Tenth.	520	30							1889
Riggs street, between R and S, to New Hampshire avenue and Eleventh street.	425	25					1,180		
S street, from Florida avenue to Seventh street.	1,300	32							1894
S street, from Seventh to Eleventh.	1,400	32			5,017				1889
S street, from Eleventh to Fourteenth.	1,300	32			995				1891 } 1894 } 1889 }
S street, from Fourteenth to Sixteenth.	1,160	32			2,457				1875
S street, from Sixteenth to New Hampshire avenue	735	32			2,681				1873
S street, from New Hampshire avenue to Twentieth street.	1,560	32			5,195				1889
S street, from Twentieth to Connecticut avenue.	300	32			1,077				1889
Oregon street, between S and T, to New Hampshire avenue and Eleventh street.	1,150	30			2,484				1895
Oregon street, from Eighteenth to Nineteenth.	402	30							
Pierce street, between S and T, to Fourteenth and Fifteenth.	690	30			2,154		1,340		1873 } 1886 }
Pierce street, between S and T, to Fifteenth and Sixteenth.	520	30			1,366				1883
Pierce street, between S and T, to Sixteenth and Seventeenth.	520	40					1,320		
Westminster street, between S and T, to Ninth and Tenth.	535	30			1,749				1893
T street, from Florida avenue to Ninth street.	800	32							1876
T street, from Ninth to Tenth.	535	32			1,766	2,667			1891
T street, from Tenth to Fourteenth.	1,600	32			4,256				1893
T street, from Fourteenth street to New Hampshire avenue.	1,320	32			5,147				1895
T street, from New Hampshire avenue to Florida avenue	1,517	32				6,305			
Willard street, between T and U, to Seventeenth and Eighteenth.	870	25					2,360		
Caroline street, between T and U, to Fifteenth and Sixteenth.	520	24			1,325				1891
Wallach street, between T and U, to Thirteenth and Fourteenth.	610	30					12,075		1886
U street, from Ninth to Tenth.	570	32			2,301				1891
U street, from Tenth to Fourteenth.	1,560	32			4,808				1893
U street, from Fourteenth to Sixteenth.	1,150	32			3,310				1891
U street, from Sixteenth street to Florida avenue.	1,220	30					4,491		
Seaton street, between U and V, to Seventeenth and Eighteenth.	560	20					1,822		
V street, from Vermont avenue to Thirteenth street.	1,348	32							
V street, from Thirteenth to Fifteenth.	1,357	32			4,543		4,211		1894

1 Permit work.

TABLE F.—Statement of character and extent of street pavements July 1, 1895—Continued.

NORTH WEST—Continued.												
Locality.	Carriageway.										Resurfaced; originally paved with—	
	Length.	Width.	Asphalt.		Coal tar and concrete.		Granite.		Cobble and blue rock.		Macadam.	
			Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.
V street, from Fifteenth street to Florida avenue.....	Feet. 1,395	32										
W street, from Florida avenue to Florida avenue.....	2,470	30										
Connecticut avenue, intersection of Florida avenue.....			140									
Connecticut avenue, from H street to Florida avenue....	4,090	50	12,513	23,733								
Florida avenue, from Massachusetts avenue to Ninth street.....	9,100	46										
Florida avenue, from Ninth street to Seventh.....	650	45					2,304					
Florida avenue, from Seventh street to New Jersey avenue.....	1,250	46	7,208									
Florida avenue, from New Jersey avenue to Fourth street.....	600	46	3,405									
Florida avenue, from Fourth street to First.....	1,320	46										
Florida avenue, from First street to North Capitol.....	950							6,563				
Indiana avenue, from First street to Third.....	1,640	35	8,530								4,907	
Louisiana avenue, from Third street to Seventh.....	1,280	60	4,054				9,243					
Louisiana avenue, from Eighth street to Ninth.....	200						1,137					
Louisiana avenue, from intersection to Seventh street and C.....	200									3,214		
Louisiana avenue, from Ninth street to Tenth.....	570	764					4,765					
Massachusetts avenue, from North Capitol street to New Jersey avenue.....	800	50		5,143								
Massachusetts avenue, from New Jersey avenue to Third street.....	800	50	3,858									
Massachusetts avenue, from Third street to Seventh....	2,000	50	3,121	785								
Massachusetts avenue, from Fourth street to Seventh....	1,670	50	3,108									
Massachusetts avenue, from Ninth to Thirteenth street.....	1,650	50	9,920									
Massachusetts avenue, from Thirteenth to Fourteenth street.....	1,550	50	2,991									
Massachusetts avenue, around Thomas Circle.....	816	50	6,000									
Massachusetts avenue, from Fourteenth to Twentieth street.....	3,200	50	12,547	1,351								
												Do.

Massachusetts avenue, around Scott Square.	565				12,560			1877		
Massachusetts avenue, from Twentieth street to Florida avenue.		50			5,817			1875		
Massachusetts avenue, intersection of Fourth street.		50			742			1877		
Massachusetts avenue, intersection of Fifth street.		50			498			1877		
Highland Terrace, from Fourteenth to Fifteenth street.	600				1,248			1878		
Missouri avenue, from Third to Four-and-a-half street.		35			2,562			1884		
Missouri avenue, from Four-and-a-half to Sixth street.	650	35				1,081	1,371	1872		
Missouri avenue, from Twenty-seventh to G street.	900	50				5,000		1894		
New Hampshire avenue, from G street to Pennsylvania avenue.	1,630	50								
New Hampshire avenue, from Pennsylvania avenue to M street.	980	50	6,992			7,997		1879		
New Hampshire avenue, from M to P street.	1,750	50	10,047					1882		
New Hampshire avenue, from P to Q street.	400	50	2,538					1885		
New Hampshire avenue, from Q to R street.	650	50	4,164					1888		
New Hampshire avenue, from R to T street.	1,340	50	8,809					1889		
New Hampshire avenue, from T to V street.	1,100	50	6,905					1890		
New Hampshire avenue, from V street to Florida avenue.	1,500	50					2,968			
New Hampshire avenue, around Dupont Circle.	1,350				2,446			1873		
New Jersey avenue, from B to C street.	570	50	1,635					1877		Do.
New Jersey avenue, from C to D street.	400	50	1,285					1877		Coal tar (west side).
New Jersey avenue, from D to E street.	400	50	2,385					1877		
New Jersey avenue, from E to F street.	400	50	1,177					1877		
New Jersey avenue, from F to G street.	400	50						1882		
New Jersey avenue, from G to H street.	2,350	50	21,463					1884		
New Jersey avenue, from H to I street.	600	50	3,969					1887		Do.
New Jersey avenue, from I street to New York avenue.	3,420	50	6,727		11,400			1887		
New Jersey avenue, from New York to Florida avenue.	1,720	50	5,004					1890		
New York avenue, from New Jersey avenue to North Capitol street.								1889		
New York avenue, from North Capitol street to Seventh street.	2,150	50	9,228					1889		
New York avenue, from Seventh street to Ninth street.	4,520	50	10,803	11,514				1872		Coal tar.
New York avenue, from Ninth to Fifteenth street.								1875		
New York avenue, from Fifteenth to Twentieth street.	450	86	1,244	619				1872		Do.
New York avenue, from Twentieth to Twenty-third street.	800	50	2,170					1891		
New York avenue, from Twenty-third to Twenty-fifth street.	630	50	3,509					1873		Asphalt.
New York avenue, from Twenty-fifth to Nineteenth street.										
New York avenue, from Nineteenth to Twentieth street.	1,980	50					11,368			
Ohio avenue, from Twelfth to Fifteenth street.	1,030	60						1872		
Pennsylvania avenue, from Fifteenth to Eighteenth street.	2,250	1084	25,322			11,355		1874		Do.
Pennsylvania avenue, from Eighteenth to Twenty-third street.	4,120	1084	53,199					1876		Do.
Pennsylvania avenue, from Twenty-third to Twenty-fifth street.	2,340	85	17,017					1871		Coal tar.
Pennsylvania avenue, from Twenty-fifth to Twenty-seventh street.	2,370	80	10,078					1875		Coal tar, north and south side.
Pennsylvania avenue, from Twenty-seventh to Twenty-ninth street.		89	3,909	11,398				1875		



Augusta street, between Half to First, E to S. avenue.	420	20	2, 270						880	1873
First street, from center Botanical Garden to Maryland avenue.	400	55								
First street, from Maryland avenue to Virginia avenue.	2, 020	35		6, 722						1873
First street, from Virginia avenue to M street.	2, 300	35		11, 196						1876
First street, from M to N.	700	32			2, 314					
First street, from N to river.	3, 700	32							13, 160	
Second street, from Maryland avenue to C street.	550	32	2, 224							1892
Second street, from C to F.	1, 200	32	5, 680							1892
Second street, from F to L.	1, 500	32			5, 886					1889
Second street, from L to river.	4, 100	32							11, 913	
Third street, from center Botanical Garden to B.	850	40		3, 835						1881
Third street, from B to Virginia avenue.	1, 300	40	5, 880							1884
Third street, from Virginia avenue to F street.	480	40	2, 088							1885
Third street, from F to H.	700	40	2, 947							1895
Third street, from H to P.	2, 728	40							9, 803	
Four-and-a-half street, from center of Mall to Maine avenue.	450	55	1, 143							1883
Four-and-a-half street, from Maine avenue to Maryland avenue.	420	55	4, 833							1890
Four-and-a-half street, from Maryland avenue to H street.	2, 650	55		12, 851						1882
Four-and-a-half street, from H to P.	3, 070	55		14, 566						1889
Union street, from Four-and-a-half to Sixth, between M and O.	1, 230	40			5, 333					
Sixth street, from center of Mall to C street.	1, 250	66								
Sixth street, from C to river.	4, 530	40		18, 700		5, 607			1, 548	1873
Six-and-a-half street from Sixth to Seventh, between D and E.	550	28								
Seventh street, from center of Mall to Water street.	5, 200	51		19, 839						1877
Eighth street, from B to C.	400	35	1, 434							1890
Eighth street, from C to E.	910	35	3, 035							1893
Eighth street, from E to H.	1, 047	35	3, 574							1895
Eighth street, from H to Water.	683	35						2, 332		
Ninth street, from B to C.	410	32	1, 458							1889
Ninth street, from C to D.	520	32			655					
Ninth street, from D to Water.	2, 100	32		7, 061						1883
Tenth street, from B to Maryland avenue.	730	32					2, 411			1886
Tenth street, from Maryland avenue to river.	1, 500	32			5, 000					
Eleventh street, from B to river.	1, 950	40		10, 511						1873
Twelfth street, from B to river.	1, 870	40		8, 444						1873
Twelfth street, from center of Mall to B street.	760	40		3, 735						1876
Thirteenth street, from B to Maryland avenue.	1, 180	40	5, 705							
Thirteenth street, from Maryland avenue to Water street.	470	40								
Thirteen-and-a-half street, from B to Maryland avenue.	1, 250	32			4, 291				2, 088	
Thirteen-and-a-half street, from Maryland avenue to river.	250	32							900	1875
Fourteenth street, from center of Mall to B street.	600	40		3, 920						
Fourteenth street, from B to Maryland avenue.	1, 420	40		8, 574						1893
Fifteenth street, from B to river.	1, 020	32							2, 625	1873
B street, from South Capitol to First.	840	35		4, 496						





SOUTHEAST.									
Location	1870	35	4,327						1881
H street, from Four-and-a-half to Seventh.....	1,070	35	4,327						1881
H street, from Seventh to Ninth.....	530	30	2,138						1883
I street, from Ninth to Water.....	400	35		1,581					1883
K street, from South Capitol to Water.....	2,900	33		900				12,746	1894
K street, from South Capitol to Canal.....	340	35		1,706				886	1890
K street, from Canal to First.....	400	35			11,108				1889
L street, from First to Water.....	2,700	35						9,048	1889
L street, from South Capitol to Four-and-a-half.....	2,280	35			4,331				1876
L street, from Four-and-a-half to Water.....	1,050	35			12,930				1891
M street, from South Capitol to Four-and-a-half.....	2,250	35		1,882				945	1883
M street, from Four-and-a-half to Water.....	1,000	35						1,380	1887
Robinson street, from L and M to Sixth and Water.....	350	25							1883
Van street, between M and N, Third and Four-and-a-half.....	620								1876
N street, from South Capitol to Sixth.....	2,730	35			15,463				1883
McLean street, N and O, Third and Four-and-a-half.....	630	30				12,127			1887
O street, from South Capitol to Water.....	2,710	32						8,530	1887
P street, from South Capitol to Four-and-a-half.....	3,310	30						6,945	1887
Q street, from South Capitol to Canal.....	1,300	30						4,367	1887
R street, from South Capitol to Canal.....	1,200	30						4,900	1887
S street, from South Capitol to Canal.....	1,200	30						4,900	1887
T street, from Half to Canal.....	1,200	30						3,620	1887
U street, from Eastern Branch to Canal.....	1,200	30						3,633	1887
V street, from Eastern Branch to Canal.....	1,700	30						2,000	1887
Canal street, from B to C.....	600	(*)				1,881			1894
Canal street, from C to E.....	2,050							11,706	1891
Water street, from P to Sixth.....	640	50		5,186					1876
Water street, from Sixth to Seventh.....	1,500	50		3,600					1884
Water street, from Seventh to Twelfth.....	2,400	50		8,000					1873
Water street, from Twelfth to Thirteen-and-a-half.....	2,800	50		14,000					1880
Delaware avenue, from B to G.....	2,000	50		4,450					1880
Delaware avenue, from G to P.....	3,100	50		2,056					1888
Maine avenue, from Third to Sixth.....	1,220	35			4,635			18,888	1873
Maryland avenue, from First to Third.....	750	60	3,394						1883
Maryland avenue, from Third to Seventh.....	1,820	60			12,803				1873
Maryland avenue, from Ninth to Water.....	4,700	60		29,050					1875
Virginia avenue, from South Capitol to Four-and-a-half.....	2,400							13,580	1881
Virginia avenue, from Four-and-a-half to Seventh.....	1,170			1,723					1881
Virginia avenue, from Ninth to Twelfth.....	1,320			3,836					1881
Georgia avenue, from South Capitol to Canal.....	1,800	50						8,888	1881
Permit work.									
South Capitol street, from B (east half) to Canal.....	1,450	50						8,419	1894
South Capitol street, from Canal to H.....	1,050	50		2,827					1894
South Capitol street, from H to M.....	1,300	50						3,594	1894
* Two roadways, 40 feet each.									

TABLE F.—Statement of character and extent of street pavements July 1, 1895—Continued.

**SOUTHEAST—Continued.**

[illegible]

	1,730	92					7,223		1887	
Seventh street, from East Capitol to Pennsylvania ave.	2,100	35					8,394		1889	
Seventh street, from D to Virginia avenue.	750	32							1890	
Seventh street, from Virginia avenue to M.	475	40	2,404			1,785			1895	
Eighth street, from East Capitol to B.	1,045	40	4,765						1894	
Eighth street, from B to D.	2,200	35	9,182						1884	
Eighth street, from D to K.	4,220	35	2,929						1883	
Ninth street, from K to M.	4,220	32				11,423			1890	
Ninth street, from East Capitol to I.	2,490	32						8,366		
Ninth street, from I to Eastern Branch.	2,490	32							1890	
Tenth street, from East Capitol to D.	1,800	32				4,040			1891	
Tenth street, from D to Pennsylvania avenue.	1,270						788			
Tenth street, from Pennsylvania avenue to Eastern Branch.	5,940							12,500		
Eleventh street, from East Capitol to C.	1,480	48					8,076		1891	
Eleventh street, from C to Pennsylvania avenue.	1,208	48					7,006		1893	
Eleventh street, from Pennsylvania avenue to bridge.	3,900	40		15,451					1899	
Eleventh street, from M to river.	6,250	56		4,387						
Twelfth street, from Lincoln Square to river.	5,640	35						17,956		
Thirteenth street, from East Capitol to D.	2,050	35						6,644		
Thirteenth street, from D to Pennsylvania avenue.	800	35				2,638				
Thirteenth street, from Pennsylvania avenue to river.	2,450	35						9,538		
Fourteenth street, from Pennsylvania avenue to river.	4,700	35						14,791		
Fifteenth street, from East Capitol to river.	4,500	35						13,796		
Sixteenth street, from East Capitol to Kentucky avenue.	3,300	35						8,788		
Seventeenth street, from East Capitol to river.	3,300	35						12,089		
Eighteenth street, from East Capitol to Congressional Cemetery.	2,300	35						8,107		
Nineteenth street, from East Capitol to Congressional Cemetery.	2,300	35						8,107		
Twentieth street, from East Capitol to B.	700	35						2,560		
Twenty-first street, from East Capitol to B.	700	35						2,560		
Twenty-second street, from East Capitol to B.	700	35						2,560		
Twenty-third street, from East Capitol to B.	700	35						2,560		
East Capitol street, from First (south half) to Fourth.	1,500	50	2,736						1879	Asphalt.
East Capitol street, from Fourth to Ninth.	1,900	50	5,028						1879	Do.
East Capitol street, from Ninth to Eleventh.	1,600	50	1,786						1893	
East Capitol street, from Lincoln Square to Eastern Branch.	4,280	50						12,941		
A street, from Second to Third.	440	35	1,724						1881	
A street, from Third to Sixth.	950	35					3,217		1886	
A street, from Sixth to Seventh.	600	35					2,391		1887	
A street, from Seventh to Ninth.	800	33					3,043		1894	
A street, from Massachusetts avenue to Eastern Branch.	4,000	33								
A street (south side) to Lincoln Square.	850	35				4,368				
B street, from South Capitol to New Jersey avenue.	300	45		870						
B street, from New Jersey avenue to Second street.	1,300	35	6,987						1873	Coal tar.
B street, from Second to Fifth.	870	35	3,810						1881	
B street, from Fifth street to North Carolina avenue.	1,340	35							1887	
B street, from North Carolina avenue to Eleventh street.	1,240	35	3,154						1891	
B street, from Eleventh to Nineteenth.	3,600	35				16,455		4,577	1891	
B street, from Nineteenth street to Eastern Branch.	1,400	25						4,622		

TABLE F.—*Statement of character and extent of street pavements July 1, 1895*—Continued.

Locality.	Carriageway.										Rearranged; originally paved with—
	Length.	Width.	Asphalt.	Coal tar and con-crete.	Granite.	Cobble and blue rock.	Macadam.	Asphalt block.	Unimproved.	Year paved.	
	<i>Feet.</i>	<i>Feet.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>		
Carroll street, between B and C, First and Second . . . . .	650	24	1, 416							1893	
C street, from South Capitol to New Jersey avenue . . . . .	360	32	1, 948							1890	
C street, from New Jersey avenue to Fourth street . . . . .	1, 980	32						6, 922		1884	
C street, from Fourth to Sixth . . . . .	520	32						1, 408		1880	
C street, from Sixth to Seventh . . . . .	600	32						2, 442		1880	
C street, from Fourth to Sixth . . . . .	500	32						1, 614		1891	
C street, from Seventh to Eleventh . . . . .	1, 200	32						4, 573	14, 400	1889	
C street, from Eleventh to Nineteenth . . . . .	4, 000	32								1893	
D street, from South Capitol to First . . . . .	454	35	3, 274					4, 394		1889	
D street, from First to Third . . . . .	970	35				1, 890		3, 860		1890	
D street, from Third to Sixth . . . . .	960	35						1, 951		1874	
D street, from Sixth to Seventh . . . . .	580	35								1892	
D street, from Seventh street to Pennsylvania avenue . . . . .	1, 000	35						17, 810		1890	
D street, from Pennsylvania avenue to Nineteenth street . . . . .	4, 550	35						2, 131			
D street, from Second to (south side) Third . . . . .	370	35	1, 454								
E street, from D and E to New Jersey avenue and South Capitol . . . . .	580	34									
E street, from South Capitol to Third . . . . .	1, 900	35							3, 703		
E street, from Third street to Pennsylvania avenue . . . . .	2, 950	35					12, 486			1885	
E street, from Pennsylvania avenue to Thirteenth street . . . . .	720	35	4, 511							1893	
E street, from Thirteenth to Nineteenth . . . . .	3, 200	35						9, 245			
G street, from Third to Eleventh . . . . .	2, 950	36					7, 627			1885	
G street, from Eleventh to Pennsylvania avenue . . . . .	860	36						1, 730		1891	
G street, from Pennsylvania avenue to Seventeenth street . . . . .	1, 875	36				2, 387	3, 737			1893	
I street, from South Capitol to Second . . . . .	1, 500	35						3, 663			
I street, from Second to Third . . . . .	1, 400	35						1, 220		1892	
I street, from Third to Eighth . . . . .	1, 820	35					5, 563			1891	
I street, from Eighth to Georgia avenue . . . . .	1, 800	35						7, 000			
K street, from South Capitol to Eastern Branch . . . . .	7, 600	{ 60 } { 35 }							27, 223		
L street, from South Capitol to Eastern Branch . . . . .	7, 600	35							27, 533		
Van street, between New Jersey avenue and First, M and N . . . . .	550	25							1, 445		



TABLE F.—Statement of character and extent of street pavements July 1, 1895—Continued.  
NORTHEAST—Continued.

Locality.	Carriageway.										Resurfaced: originally paved with—
	Length.	Width.	Asphalt.	Coal tar and con-crete.	Granite.	Cobble and blue rock.	Macadam.	Asphalt block.	Unimproved.	Year paved.	Year resurfaced.
North Capitol street, from New York avenue (east side) to O.	Feet. 50		Sq. yds. 832							1894	
North Capitol street, from O (east side) to Florida avenue.		50							1,233		
Hancock street, between North Capitol and First, F and G.	540	24							1,635		
First street, from East Capitol to B.	750	35		4,412						1873	Coal tar.
First street, from B to C.	520	35	1,987							1881	
First street, from C to E.	1,320	35	5,616							1891	
First street, from F to Florida avenue.	4,300	35							15,277		
Colfax street, from First and Second to L and M.	660	30							2,167	1881	
Second street, from East Capitol to Maryland avenue.	720	32	2,440					1,846		1881	
Second street, from Maryland avenue to C.	550	32						4,523		1881	
Second street, from C to F.	1,280	30								1894	
Second street, from F to H.	880	32	3,885						10,247		
Second street, from H to Florida avenue.	2,900	32							1,000		
Parker street, between Second and Third, I and K.	380	24								1884	
Third street, from East Capitol to Maryland avenue.	970	32	3,121							1887	
Third street, from East Capitol to Maryland avenue.	300	32						1,090		1890	
Third street, from Maryland avenue to C.	300	32	4,314							1892	
Third street, from C to F.	1,260	32	3,834						8,640		
Third street, from F to H.	1,000	32						4,526		1885	
Third street, from H to Florida avenue.	2,680	32						1,912		1887	
Fourth street, from East Capitol to Maryland avenue.	1,130	35								1881	
Fourth street, from Maryland avenue to Massachusetts avenue.	1,370	35									
Fourth street, from Massachusetts avenue to D.	240	35						837		1891	
Fourth street, from D to H.	1,955	35							7,247		
Fourth street, from H to K.	790	35	3,022							1894	
Fourth street, from K to Florida avenue.	1,653	35							6,068		
Fifth street, from East Capitol to C.	1,120	40						4,816		1886	
Fifth street, from C to D.	220	40						875		1890	
Fifth street, from D to Florida avenue.	4,200	40							16,495		
Sixth street, from East Capitol to Maryland avenue.	1,620	35						4,626		1886	





TABLE F.—Statement of character and extent of street pavements July 1, 1895—Continued.  
NORTHEAST—Continued.

Locality.	Carriageway.										Resurfaced; originally paved with—
	Length.	Width.	Asphalt.	Coal tar and concrete.	Granite.	Cobble and blue rock.	Macadam.	Asphalt block.	Unimproved.	Year paved.	Year resurfaced.
East Capitol street, from Lincoln Square to Eastern Branch.	Feet. 4,400	Feet. 50									
A street, from First to Second.	640	35	2,788						12,941	1880	
A street, from Second to Fourth.	820	35	2,972							1884	
A street, from Fourth to Seventh.	1,050	35		4,206						1887	
A street, from Seventh to Ninth.	750	35						2,300		1890	
A street, from North Carolina avenue to Eastern Branch.	4,200	35							17,111		
A street, north side of Lincoln Square.	850		4,077							1894	Macadam.
B street, from North Capitol street to Delaware avenue.	220	46			1,533						
B street, from Delaware avenue to First.	700	46	4,411							1873	Coal tar.
B street, from First to Second.	640	40		3,098						1874	Do.
B street, from Second to Fourth.	700	35	2,556							1884	
B street, from Fourth to Sixth.	500	35	2,016							1885	
B street, from Sixth to Massachusetts avenue.	500	35		2,250					24,480	1887	
B street, from Massachusetts avenue to Eastern Branch.	6,800	30							1,110		
Park street, between B and C, Eleventh and Twelfth.	330	30									
C street, from North Capitol to Delaware avenue.	420	63			1,107					1879	
C street, from Delaware avenue to First.	500	32			2,081					1880	
C street, from First to Third.	1,090	38			4,191					1882	
C street, from Third to Fourth.	400	32			1,505					1884	
C street, from Fourth to Sixth.	1,120	32						4,468		1884	
C street, from Sixth to Eighth.	950	32						3,986		1888	
C street, from Eighth to Tenth.	700	32						2,180		1891	
C street, from Tenth to Eastern Branch.	6,280	32							19,195		
D street, from North Capitol to Delaware avenue.	340	32							1,920		
D street, from Delaware avenue to Massachusetts avenue.	1,200	32	4,117							1893	
D street, from Massachusetts avenue to Maryland avenue.	1,450	32					5,446			1899	
D street, from Maryland avenue to Fifteenth.	3,500	35							16,063		
E street, from North Capitol to First.	800	35			2,913					1893	

	1,420	30				5,640		1883	
E street, from First to Fourth.....	4,862	35				15,439		1883	
California street, between E and F, First and Second.....	2,000	35						1888	
F street, from North Capitol to Third.....	4,642	35				17,961		1888	
Chicago street, between F and G, First and Second.....	561	30				2,285		1880	
Morris street, between F and G, Sixth and Seventh.....	860	35				2,308		1880	
G street, from North Capitol to First.....	1,800	35				6,161		1881	
G street, from First to Sixth.....	3,066	40				10,932		1881	
G street, from Sixth to Seventh.....	750	20				1,151		1883	Asphalt.
Jackson street, between G and H, North Capitol and First.....	450	30						1883	Asphalt (north side).
James street, between G and H, Twelfth and Thirteenth.....	850	56						1883	Asphalt (north side).
H street, from North Capitol to First.....	6,320	56						1889	Asphalt (north side).
H street, from First to Fifteenth.....	Do.	24						1889	
Do.	450	24						1889	
Wylie street, between H and I, Twelfth and Thirteenth.....	840	35				7,531		1889	
I street, from North Capitol to First.....	1,780	35				8,058		1889	
I street, from Sixth to Seventh.....	561	35						1889	
I street, from Seventh to Florida avenue.....	2,587	35				23,438		1889	
Myrtle street, between North Capitol and First, I and K.....	850	20				2,220		1889	
K street, from North Capitol to First.....	850	50				1,267		1889	
K street, from First to Florida avenue.....	3,520	50				15,154		1889	
Fenton street, between North Capitol and First, K and L.....	561	24				2,220		1889	
Callan street, between K and L, Sixth and Seventh.....	850	35				2,220		1889	
L street, from North Capitol to Florida avenue.....	850	25				2,220		1889	
Forsyth street, between North Capitol and First, L and M.....	850	25				2,220		1889	
Babcock street, between L and M, North Capitol and First.....	850	25						1889	
Riley street, between L and M, North Capitol and First.....	850	25				2,220		1889	
M street, from North Capitol to Second.....	1,468	32				5,323		1884	
M street, from Second to Florida avenue.....	1,730	32				6,045		1884	
Patterson street, between M and N, North Capitol and Second.....	1,480	25						1884	
Morton Place, between Sixth and Seventh streets, M and L.....	850	25				2,100		1887	
N street, from North Capitol to Florida avenue.....	2,270	35				7,300		1887	
Decatur street, between P and O, North Capitol and First.....	747	25				1,245		1887	
Orleans street, between L and M, Sixth and Seventh.....	561	30				2,100		1887	
O street, from North Capitol to Florida avenue.....	1,250	35				4,622		1879	
P street, from North Capitol to Florida avenue.....	1,700	35				2,513		1879	
Delaware avenue, from B to C streets.....	590	50				27,112		1892	
Delaware avenue, from C street to Florida avenue.....	5,300	50				26,093		1892	
Florida avenue, from North Capitol to Ninth street.....	5,420	46						1887	
Florida avenue, from Ninth to Fifteenth street.....	3,060	46				11,535		1887	
Maryland avenue, from First to Fourth street.....	1,650	60						1887	

\* Second to Seventh street.

† Permit work.



	370	30	966						1891	
Prospect street, from Thirty-fifth to Thirty-sixth.	370	30	966						1891	
Prospect street, from Thirty-sixth to Thirty-eighth.	670	30						2,089		
N street, from Rock Creek to Twenty-seventh street.	300	30						870		
N street, from Twenty-seventh to Twenty-eighth.	320	30							1874	
N street, from Twenty-eighth to Thirtieth.	540	30					959		1882	
N street, from Thirtieth to Thirty-second.	1,100	30	3,525					1,569	1880	
N street, from Thirty-second to Thirty-fifth.	1,640	30	5,889						1880	
N street, from Thirty-fifth to Thirty-sixth.	1,430	30	1,081						1891	
N street, from Thirty-sixth to Thirty-eighth.	650	30						2,089		
O street, from Rock Creek to Twenty-eighth street.	980	30						2,847	1890	
O street, from Twenty-eighth to Twenty-ninth.	300	30	860						1885	
O street, from Twenty-ninth to Thirty-second.	1,590	30	4,829						1879	
O street, from Thirty-second to Thirty-fifth.	1,500	30			4,435				1888	
O street, from Thirty-fifth to college gate.	1,730	30			2,358					
Dumbarton avenue, from Rock Creek to Twenty-seventh street.	450	30			1,250					
Dumbarton avenue, from Twenty-seventh to Twenty-eighth street.	375	30						1,500		
Dumbarton avenue, from Twenty-eighth to Thirty-second street.	1,760	30			3,609				1887	
P street, from 340 feet west of bridge.	340	30	1,500						1879	
P street, from Rock Creek to Twenty-eighth street.	1,600	30			6,869				1878	
P street, from Twenty-eighth to Thirty-second.	2,000	30			2,042				1879	
P street, from Thirty-second to Thirty-fifth.	1,370	30			1,969				1879	
P street, from Thirty-fifth to Thirty-seventh.	680	30			3,624			2,084	1884	
Bank street, between M and Prospect to Thirty-third and Thirty-fourth.	250									
Aqueduct street, from M street to bridge.	330									
Mill street, from P to North.	600	30					1,500			
North street, from P to North.	400	30						1,500	1889	
Q street, from Twenty-eighth to Thirtieth.	550	30	2,000						1887	
Q street, from Thirtieth to Valley.	1,200	30	3,943						1887	
Q street, from Valley to Thirty-second.	300	30	1,067						1891	
Q street, from Thirty-second to Thirty-fifth.	1,230	30	4,002					3,365		
R street, from Thirty-second to Thirty-fifth.	1,000	30						2,577		
R street, from Thirty-fifth to Thirty-seventh.	760	30						2,597		
T street, from Thirty-second to Thirty-fifth.	750	30						10,977	1894	
U street, from Twenty-eighth to Thirty-second.	2,780	30	1,552						1894	
U street, from Thirty-second to Thirty-fifth.	600	30	1,406						1893	
Cambridge Place, Irvin Place, and Avon Place in Cooke Park.	1,410	25								
Twenty-seventh street, from M to P.	1,420	30						4,750		
Twenty-eighth street, from Rock Creek to M street.	400	30							1872	1894
Twenty-eighth street, from M to P.	1,420	30	4,428						1890	
Twenty-eighth street, from P to Q.	400	30	1,474							
Twenty-eighth street, from Q to U.	690	30						3,116		
Twenty-ninth street, from Water to M.	850	30							1874	
Twenty-ninth street, from M to N.	550	30			1,885				1882	
Twenty-ninth street from N to P.	850	30	2,969						1883	

Cobble.

Asphalt block.

1 Permit work.

TABLE F.—*Statement of character and extent of street pavements July 1, 1895—Continued.*  
 GEORGETOWN—Continued.

Locality.	Carriageway.										Resurfaced; originally paved with—
	Length.	Width.	Asphalt.	Coal tar and concrete.	Granite.	Cobble and blue rock.	Macadam.	Asphalt block.	Unimproved.	Year paved.	Year resurfaced.
Twenty-ninth street, from P to Q.....	Feet. 370	30	1,261						Sq. yds. 4,610	1890	
Twenty-ninth street, from Q to U.....	700	30									
Thirtieth street, from W to M.....	880	30				2,732				1875	
Thirtieth street, from N to X.....	550	30			2,121					1879	
Thirtieth street, from Y to P.....	840	30	2,932							1883	
Thirtieth street, from P to Q.....	370	30	1,282							1888	
Thirtieth street, from Q to U.....	700	30			2,746					1883	
Thirtieth street, from P to Q.....	880	30				2,839				1874	
Thirtieth street, between Thirtieth and Thirty-first to Water and M.....											
Thirty-first street, from K to Canal.....	550	30				1,833				1887	
Thirty-first street, from Canal to M.....	240	30		1,209						1880	
Thirty-first street, from M to N.....	525	30			1,742					1880	
Thirty-first street, from N to P.....	850	30	2,937							1882	
Thirty-first street, from P to U.....	840	30	1,832		3,285					1885	
Valley street, between Thirty-first and Thirty-second to P and U.....	550							3,849		1895	
Thirty-second street, from Water to M.....	1,500	30				3,540					
Thirty-second street, from M to P.....	860	30			6,763					1879	
Thirty-second street, from P to U.....	1,500	30				6,416				1894	
Potomac street, from Canal to M.....	650	30				1,071				1875	
Potomac street, from M to Prospect.....	320	30			889					1879	
Potomac street, from Prospect to O.....	600	30	1,840							1884	
Potomac street, from M to Prospect.....	320	30			664					1884	
Thirty-third street, from M to Water.....	500	30							1,660		
Thirty-third street, from M to N.....	550	30	1,580							1890	
Thirty-third street, from N to P.....	620	30	4,675							1883	
Thirty-third street, from P to Thirty-second.....	1,300									1890	
Thirty-fourth street, from Water to M.....	350	30									
Thirty-fourth street, from M to N.....	550	30	1,660						1,066		
Thirty-fourth street, from N to P.....	600	30	2,109							1890	
Thirty-fourth street, from P to R.....	680	30	2,265							1892	
Thirty-fourth street, from R to Thirty-second.....	1,800	30								1891	
Thirty-fifth street, from Water to M.....	270	30					6,570		660		

Asphalt block.

[illegible]

**SUBURBAN (NORTHWEST).**

[illegible]

TABLE F.—Statement of character and extent of street pavements July 1, 1895—Continued.  
SUBURBAN (NORTHWEST)—Continued.

Locality.	Carriageway.										Resurfaced; originally paved with—
	Length.	Width.	Asphalt.	Coal tar and concrete.	Granite.	Cobble and blue rock.	Macadam.	Asphalt block.	Unimproved.	Year paved.	Year resurfaced.
Connecticut avenue extended.	Feet. 119, 189 659	50	Sq. yds. 12, 195				Sq. yds. 70, 228	Sq. yds. 1891		1891	
Champlain avenue.	1, 900						6, 968			1894	
Linden street, from Maple avenue to Pomeroy street.	1, 184	33					4, 672			1891	
Lincoln street, from Pomeroy to College.	740	28					2, 537			1873	
Steuken street, from Brightwood avenue to Sherman st.	786	30					2, 712			1893	
Sheridan street, from Brightwood avenue to Sherman st.	780	30					2, 660			1889	
New-cut road, from Thirty-fifth to Thirty-ninth street.	1, 210						3, 695			1891	
New Hampshire avenue (Petworth), from Rock Creek Church road to Omaha street.	1, 905	50	5, 081							1892	
Omaha street, from New Hampshire avenue to Fifth street.	920	35	3, 536							1892	
Massachusetts avenue, from Florida avenue to Belmont street.	3, 469						19, 838			1893	
Road from Broad Branch road to Chevy Chase Circle.	403						7, 387			1895	
SUBURBAN (NORTHEAST).											
First street, from Q to R.	137	35	2, 206	( )						1891	
First street, from R to alley.	519	35	538	( )						1892	
Second street extended, from R to T.	1, 024	35	4, 213	( )						1891	
Q street, from Lincoln avenue to First street.	554	35	2, 268	( )						1892	
Q street, from First street to Eckington Place.	430	35	1, 666	( )						1892	
Third street, from R to Quincy.	262	35	1, 133	( )						1892	
Quincy street, from Third street to Eckington line.	270	30	919	( )						1892	
Quincy street, from Lincoln avenue to Eckington Place.	1, 098	30	3, 770	( )						1891	
Eckington Place, from Q to R.	536	24	1, 560	( )						1891	
Fourth street, from R to railroad track.	262	35	1, 022	( )						1891	
R street, from Fourth street to Brentwood road.	584	35	2, 437	( )						1891	
Nichols avenue, from Harrison street, southeast (Anacostia).		34			6, 813					{1889} {1891}	
M street, from Twelfth to Trinidad avenue.	850						2, 695			1894	

1 Permit work.

## REPORT OF SUPERINTENDENT OF STREETS.

WASHINGTON, D. C., August 9, 1895.

SIR: I have the honor to submit the following report of the operations of this department for the fiscal year ended June 30, 1895:

The appropriation for current repairs to streets, avenues, and alleys was \$35,000, which amount was expended. (See statement marked A.)

Respectfully submitted.

H. N. MOSS, *Superintendent of Streets.*

The ENGINEER COMMISSIONER.

(Through Capt. G. J. Fiebeger, U. S. A.)

STATEMENT A.—*Work done under the appropriation for current repairs to streets, avenues, and alleys, from July 1, 1894, to June 30, 1895.*

Grading .....	cubic yards..	2, 918
Flag laid .....	linear feet..	2, 489
Flag relaid .....	do .....	12, 056
Curb set .....	do .....	165
Curb reset .....	do .....	3, 970
Cobble paved .....	square yards..	18, 888
Brick sidewalk paved .....	do .....	914
Brick sidewalk repaved .....	do .....	3, 979
Granite block paved .....	do .....	63
Granite block repaved .....	do .....	3, 689
Vitrified brick paved .....	do .....	1, 436
Vitrified brick repaved .....	do .....	213
Asphalt block paved .....	do .....	286
Asphalt block repaved .....	do .....	1, 557
Trap rock repaved .....	do .....	1, 543
Hydraulic base .....	cubic yards..	162
Brick on edge .....	square yards..	54
Sewer pipe laid .....	linear feet..	108
Asphalt tile repaved .....	square yards..	116
Cement tile paved .....	do .....	24
Cement tile repaved .....	do .....	140
Asphalt roadway .....	cubic yards..	82
Asphalt binder .....	do .....	51
Vitrified tile paved .....	square yards..	15
Macadam roadway resurfaced .....	do .....	1, 273
Cement sidewalk laid .....	do .....	7
Masonry .....	cubic yards..	3
Wood fence constructed .....	linear feet..	175
Labor .....		\$20, 004. 35
Material .....		14, 995. 65

During the year there were 1,314 dangerous holes repaired, aggregating 6,281 square yards, at a total cost of \$2,605.40.

Statement marked B is a list of the work done under the permit system, under which system the property owners requesting the improvements pay one-half the total cost.



**STATEMENT B.—Permit work.**

[illegible]

32	7, 9, 11, and 13 P street NW...	Chas. Butt.	11	50	46	48	434	138	42.83
33	1524 Twenty-sixth street NW...	John Cully	52	44	29				102.09
34	1333 Connecticut avenue NW...	F. B. McGuire							105.90
35	510 I street NW...	N. T. Haller				30			43.63
36	1318 and 1320 Twelfth street NW...	T. Jarvis				39			62.88
37	1315 Massachusetts avenue NW...	A. F. A. King				36			56.20
38	1515 Rhode Island avenue NW...	W. C. Morrison				21			32.90
39	Northeast corner Eighteenth and H streets NW...	W. A. Richardson				66			102.33
40	K street, between Third and Fourth SE...	John Miller	290	384			402		190.82
41	South side Willard street, between Seventeenth and Eighteenth NW...	A. P. Fardon	12	87					66.24
42	310 Seventh street NW...	C. D. Fowler				21			37.13
43	312 Seventh street NW...	do				23			35.40
44	2014 P street NW...	J. J. Sheehy				22			35.46
45	1751 P street NW...	C. T. Mason				16			28.53
46	1812 N street NW...	W. T. Harris				21			34.17
47	1410 Fifteenth street NW...	S. T. G. Morrell			20	23			56.89
48	Southeast corner Fifteenth street and New York avenue NW...	J. W. Nairn				141			382.59
49	1720 Sixteenth street NW...	H. B. Brown	398	844	597				1,153.18
50	T street, between Second and Rhode Island avenue NW...	Barnes & Weaver							237.33
51	1615 New Hampshire avenue NW...	G. Y. Atlee				25			40.17
52	Corner Eighteenth and I streets NW...	J. S. Larcombe				134			220.78
53	1303 F street NW...	C. D. Lieberman				26			38.87
54	1514 Twelfth street NW...	D. B. Groff				20			32.76
55	1735 N street NW...	J. S. Larcombe				24			37.05
56	736, 738, and 740 Third street NW...	A. G. Cook				24			107.00
57	1535 I street NW...	Jas. G. Berret		74					52.05
58	1612 K street NW...	M. S. Quay				69			112.77
59	1640 Rhode Island avenue NW...	J. S. Larcombe				52			84.97
60	Alley, square 1030 NE...	Eckington and Soldiers Home R. Co.	303					531	827.10
61	912 Fourteenth street NW...	Galloway & Son				29			45.99
62	218 Four and a half street NW...	D. H. Nichols				38			58.83
63	1427 to 1430 C street NW...	J. Edw. Chapman				72			213.23
64	519 Seventh street NW...	Luchs & Bro			86				48.79
65	1325 F street NW...	N. W. Burchell			9	33			99.34
66	1340 Vermont avenue NW...	Hill & Johnston			33	29			46.20
67	Northeast corner Twelfth street and Pennsylvania avenue NW...	L. E. Dessez			135	363			713.15
68	1520 K street NW...	Wm. S. Albert				6			9.81
69	1320 and 1322 F street NW...	C. C. Willard			45				32.75
70	East side Ninth street, between G and H NE...	J. C. Yost				58			90.92
71	1533 I street NW...	Chas. B. Howry		38					15.75
72	1720 Sixteenth street (Riggs street side) NW...	Henry B. Brown				106			171.31
73	1733 P street NW...	Edwin M. Truall			20	16			49.80
74	1344, 1346, and 1348 Wallach street NW...	E. J. Stallwagen				54			86.51

**STATEMENT B.—Permit work—Continued.**

[illegible]



STATEMENT B.—Permit work—Continued.

No.	Location.	For whom done.	Grading (cubic yards).	Paving brick (square yards).	Curb set (linear feet).	Curb reset (linear feet).	Cement sidewalk (square yards).	Flag relaid (linear feet).	Cobble paved (square yards).	Concrete base (cubic yards).	Asphalt tile sidewalk (square yards).	Vitrified block (square yards).	Flag sidewalk relaid (square yards).	Asphalt block paved (square yards).	Vitrified brick repaved (square yards).	Cost.
138	Southeast corner Twenty-second and D streets N.W.	T. E. Waggaman.....	350	238												\$210.51
139	1214 N street N.W.	D. E. Burton.....				22	31									49.56
140	1333 R street N.W.	J. L. Pugh.....				25	25									42.18
141	1327 Sixteenth street N.W.	J. F. Carpenter.....					39									58.79
142	897 I street N.W.	N. D. Lerner.....				45	32									55.48
143	1324 to 1334, inclusive, F street N.W.	C. C. Willard.....			130		163									396.47
144	54 and 58 New York avenue N.W.	B. E. Emmert.....					45									70.37
145	1906 Fourteenth street N.W.	Wm. L. Conley.....			25	10	30									77.34
146	1344 Vermont avenue N.W.	L. W. Funk.....					33							116		51.28
147	Alley, square 195 N.W.	Geo. F. Huff.....					25		23							288.96
148	1329 R street N.W.	T. D. White.....				3	76									38.88
149	Northwest corner Hopkins and O streets N.W.	F. B. Austin.....			24											144.42
152	934 I street N.W.	F. L. Ourand.....				21	22									36.62
	Total.....		6,173	4,193	5,997	1,562	10,657	464	166	16	303	2,432	110	116	8	32,353.47

Under the act of Congress of August 7, 1894, the Commissioners of the District of Columbia are empowered, whenever in their judgment the public health, safety, or comfort requires it, to improve and repair alleys and sidewalks and pay the total cost of the work out of the appropriation for assessment and permit work. One-half the cost of work ordered under the assessment system is charged against the abutting property and becomes a lien upon said property. Statement marked C gives a list of the work which was done under the assessment system, the total amount of which is \$104,513.82.

## C.—Assessment work.

No.	Location.	Grading. Sq. yds.	Brick side- walk. paved.	Brick side- walk. re- paved.	Curb set.	Curb reest.	Cement side- walk.	Asphalt block. paved.	Con- crete base.	Granite block. re- paved.	Cobble, paved.	Flag, relaid.	Asphalt tile, paved.	Vitri- fied block. paved.	Ma- sonry.	Cost.
1	K street, between Fourteenth and Fifteenth NW	.....	.....	.....	433	18	404	.....	13	.....	.....	.....	.....	.....	.....	\$1,180.15
2	K street, between Fifteenth and Sixteenth NW	.....	.....	.....	520	.....	476	.....	14	.....	.....	.....	.....	.....	.....	1,428.16
3	C street, between Eleventh and Twelfth NE	.....	.....	.....	.....	248	.....	.....	.....	.....	.....	.....	.....	.....	.....	89.42
4	Sixth street, between F and G SW	68	.....	.....	.....	628	.....	.....	.....	67	.....	.....	.....	.....	.....	255.33
5	D street, between Second and Third NW	.....	.....	.....	.....	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	438.48
6	C street, between Eleventh and Twelfth NE	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	183.46
7	D street, between Tenth and Kentucky avenue SE	681	.....	.....	.....	76	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,896.90
8	Pennsylvania avenue, between Four-and-a-half and Sixth streets NW	.....	.....	.....	15	12	373	.....	.....	.....	.....	.....	.....	.....	.....	613.64
9	Pennsylvania avenue, between Ninth and Tenth streets NW	.....	.....	.....	.....	.....	42	.....	.....	.....	.....	.....	.....	.....	.....	87.31
11	G street, between Eighteenth and Nineteenth NW	.....	.....	.....	.....	10	329	.....	.....	.....	.....	.....	.....	.....	.....	545.83
16	Corcoran street, between Fourteenth and Fifteenth NW	.....	.....	.....	.....	1,413	1,402	.....	.....	.....	.....	.....	.....	.....	.....	2,487.13
21	Oregon avenue, between New Hampshire avenue and Eighteenth street NW	.....	.....	.....	208	.....	214	.....	.....	.....	.....	.....	.....	.....	.....	603.76
23	Thirty-first street, between N and P NW	.....	.....	.....	.....	45	1,022	.....	.....	.....	.....	.....	.....	.....	.....	1,746.54
24	Pennsylvania avenue, between Four-and-a-half and Sixth streets NW	.....	.....	.....	.....	.....	.....	413	.....	.....	.....	.....	.....	.....	.....	696.06
25	North Capitol street, between New York avenue and O street	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	436.72
26	Second street, between Indiana avenue and F street NW	163	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	649.46
27	Sixth street, between O and P NW	42	.....	.....	.....	86	.....	.....	.....	.....	.....	.....	.....	.....	.....	436.06
28	Eleventh street, between I and K NW	40	.....	.....	.....	138	.....	.....	.....	.....	.....	.....	.....	.....	.....	438.75
29	W street, between Thirteenth and Fourteenth NW	.....	.....	.....	.....	547	.....	.....	.....	.....	.....	.....	.....	.....	.....	407.85
30	P street, between Twenty-second and Rock Creek NW	.....	.....	.....	.....	72	.....	.....	.....	.....	.....	.....	.....	.....	.....	247.91
31	Thirty-first street, between M and N NW	28	.....	.....	15	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	346.72
32	Jefferson street, between K and Chesapeake and Ohio Canal NW	.....	.....	.....	.....	42	.....	.....	.....	.....	5	42	.....	.....	.....	694.01
33	Thirteen-and-a-half street, between C and D NW	64	.....	.....	.....	571	.....	.....	.....	.....	95	.....	.....	.....	.....	600.13

**C.—Assessment work—Continued.**

[illegible]

59	D street, between South Capitol and First SE.	50	1,400						1,020.25
61	Fifteenth street, between G and Maryland avenue NE.	118	297						677.93
63	Fourth street, between H and K NE.	78	1,541	315	18				766.67
65	Alley, square 628, NW.						664		1,558.93
66	Alley, square 362 (north half), NW.						1,011		2,388.15
67	Alley, square 140, NW.						1,912		4,329.09
68	Alley, square 273, NW.			30	12			1,337	2,499.07
69	Alley, square 4, NW.				4		559		1,238.27
70	Alley, square 83, NW.								333.29
71	Alley, square 112, Georgetown.							174	
73	Elgth street, between L and M SE.	140		18	23			538	128
74	K street, between Eighth and Ninth SE.	400	400						2,106.24
77	C street, between Eleventh and Twelfth NE.								275.30
79		103	311						234.46
81	H street, between Four-and-a-half and Sixth SW.		632		350				129.91
82	F street, Ninth to Eleventh SW.		1,600						176.25
86	First street, K to Pierce NW.	440	1,750	1,628					1,229.98
87	Eleventh street, between F and G NE.	608	1,409	1,585					1,954.55
89	Eleventh street, between G and I NE.			371	18				2,976.33
94	Eighteenth street, between New York avenue and F NW.		320		372				439.49
97	Florida avenue, between Thirteenth and Fourteenth NW.		810		648				215.00
101	Alley, square 37, NW.	668			28			1,707	565.40
102	Alley, square 152 (south half), NW.	294			17			880	3,240.49
103	Alley, square 509, NW.	857						1,272	1,868.03
104	Alley, square 510 (north half), NW.	1,400						809	2,408.92
107	Alley, square 235, NW.	235		72				2,164	1,512.57
108	Alley, square 275, NW.							2,253	4,191.07
115	Eighteenth street extended, Florida avenue to Columbia road NW.								4,366.84
117	First street, between D and E SE.	1,220	1,099	80	30	3,541			5,697.07
121	Park street, between Sixteenth and Seventeenth NW.	98	162						1,911.85
122	Florida avenue, between Nineteenth and Twentieth; T street, between Nineteenth and Florida avenue, and Florida avenue, between Twentieth street and Connecticut avenue NW.			397					151.48
123	926, 928, and 930 Fourth street NE.	450	465						819.72
124	New York avenue, between Ninth and Tenth streets NW.					44			70.87
127	Twelfth street, between East Capitol and B NE.	33	952			1,681			2,782.93
135	New York avenue, between Fourteenth and Fifteenth streets NW.			34					505.70
136	Fourteenth street, between New York avenue and H NW.				715				1,165.68
					402				652.10



## C.—Assessment work—Continued.

No.	Location.	Grading.	Brick side-walk, paved.	Brick side-walk, re-paved.	Curb set.	Curb re-set.	Cement side-walk.	As-phalt block, paved.	Con-crete base.	Granite block, re-paved.	Cobble, paved.	Flag, relaid.	As-phalt tile, paved.	Vitri-fied block, paved.	Ma-sonry.	Cost.
		Cu. yds.	Sq. yds.	Sq. yds.	Lin. ft.	Lin. ft.	Sq. yds.	Sq. yds.	Cu. yds.	Sq. yds.	Sq. yds.	Lin. ft.	Sq. yds.	Sq. yds.	Cu. yds.	
139	T street, between Fourteenth and New Hampshire avenue NW						898									\$1,438.11
141	P street, between Seventeenth and Eighteenth NW				400		279									519.07
142	Twelfth street, between East Capitol and B N E				1,040	78										1,254.36
143	T street, between Fourteenth and New Hampshire avenue NW															1,889.40
144	Alley, square 152 (north half), NW			2,412										309		844.93
	Total	10,770	15,860	23,772	11,633	8,989	13,316	5,740	27	68	196	42	111	14,290	128	104,513.82

The appropriation for repairing curbs and sidewalks around public reservations was \$5,000, all of which was expended. For table showing the work done under this appropriation, see statement marked D.

**STATEMENT D.—Repairing sidewalks and curbs around Government reservations, 1895.**

No.	Location.	Cement side- walks.	Grading.	Flag side- walk re- laid.	Curb set.	Curb reset.	Hy- draulic base.	Cost.
		<i>Sq. yds.</i>	<i>Ou. yds.</i>	<i>Sq. yds.</i>	<i>Lin. ft.</i>	<i>Lin. ft.</i>	<i>Ou. yds.</i>	
4	North side Pennsylvania ave- nue, between Thirteenth and Thirteenth and a-half streets NW .....	953						\$1,391.39
5	East side Fifth street, be- tween F and G NW .....	321						481.16
6	Both sides Seventh street, west, between B north, and B south .....			3,282				634.04
8	Dupont Circle NW .....			1,270		765		389.25
10	South side K street, front Mc- Pherson Square, NW .....	205	5		255		7	594.90
15	Intersection Rhode Island avenue and M street NW .....	63						93.79
27	Iowa Circle NW .....			2,000		380		276.69
29	East side Twentieth street, between Q and Connecticut avenue NW .....	226	8		272	21		654.91
	Total .....	1,768	13	6,552	527	1,166	7	4,516.13

Statement marked E gives a list of miscellaneous work, the cost of which was paid out of various appropriations which do not come under this department. The total cost of such work was \$10,315.50.

**STATEMENT E.—Miscellaneous work.**

No.	Location.	Appropriation from which paid.	Grading (cubic yards).	Brick sidewalk laid (square yards).	Brick sidewalk relaid (square yards).	Asphalt, tile sidewalk laid (square yards).	Asphalt, tile sidewalk relaid (square yards).	Cement sidewalk (square yards).	Curb set (linear feet).	Curb reset (linear feet).	Flag laid (linear feet).
1	K street, between Fourth and Fifth NW.	Repairs to concrete pavements.			13						
2	Executive avenue NW .....	do .....	140							26	
9	K street, between South Capitol and First SW.	Work on streets and avenues, southwest section.	18		12						
11	I street, between Fifteenth and Sixteenth NW.	Repairs to concrete pavements.			450						
12	Connecticut avenue, be- tween H and I sta. NW.	do .....			366						
13	Intersection of Sheridan street and Brightwood avenue NW.	Repairs to county roads.	8								
14	M street, between Sixteenth and Eighteenth NW.	Repairs to concrete pavements.	5		250	137					
16	No. 7 engine house, K street, between Ninth and Tenth NW.	Repairs to engine houses.	52								
18	1736 and 1738 M street NW.	Repairs to concrete pavements.						87			
19	East side Connecticut ave- nue, above Florida ave- nue NW.	Repairs to county roads.									35
20	M street, between Sixth and Seventh NW.	Repairs to concrete pavements.			200						
21	South side Prospect street, between Thirty-seventh and Thirty-eighth NW.	Work on streets and avenues, George- town schedule.	128						316		
22	Thirty-second street, be- tween M and N NW.	do .....			44	80					

## STATEMENT E.—Miscellaneous work—Continued.

No.	Location.	Appropriation from which paid.	Grading (cubic yards).								Cost.
			Grading (cubic yards).	Brick sidewalk laid square yards).	Brick sidewalk relaid square yards).	Asphalt, tile sidewalk laid (square yards).	Asphalt, tile sidewalk relaid (square yards).	Cement sidewalk (square yards).	Curb set (linear feet).	Curb reset (linear feet).	
23	East side Twelfth street, between C and D SE.	Work on streets and avenues, southeast section.	115	516							
26	No. 10 engine house, Maryland avenue, between Thirteenth and Fourteenth streets NE.	New engine house, northeast section.							109	22	
28	Dupont Circle NW	Repairs to concrete pavements.			361		44				
Total.....			466	516	1,696	217	44	87	425	48	35

No.	Location.	Appropriation from which paid.	Flag relaid (linear feet).							Cost.
			Flag relaid (linear feet).	Asphalt block roadway paved (square yards).	Vitrified block roadway paved (square yards).	Asphalt roadway (square yards).	Granite block roadway paved (square yards).	Cobble paved (square yards).	Drain pipe laid (linear feet).	
1	K street, between Fourth and Fifth NW.	Repairs to concrete pavements.								\$10.00
2	Executive avenue NW	do				5,171			1,789	8,207.35
9	K street, between South Capitol and First, SW.	Work on streets and avenues, southwest section.	14				277	4		469.99
11	I street, between Fifteenth and Sixteenth NW.	Repairs to concrete pavements.								93.75
12	Connecticut avenue, between H and I sts. NW.	do								84.45
13	Intersection of Sheridan street and Brightwood avenue NW.	Repairs to county roads.					40			48.45
14	M street, between Sixteenth and Eighteenth NW.	Repairs to concrete pavements.								77.62
16	No. 7 engine house, R street, between Ninth and Tenth NW.	Repairs to engine houses.		128						202.55
18	1736 and 1638 M street NW.	Repairs to concrete pavements.								126.86
19	East side Connecticut avenue, above Florida avenue NW.	Repairs to county roads.					40			11.75
20	M street, between Sixth and Seventh NW.	Repairs to concrete pavements.								28.50
21	South side Prospect street, between Thirty-seventh and Thirty-eighth NW.	Work on streets and avenues, Georgetown schedule.					151			97.67
22	Thirty-second street, between M and N NW.	do	4							29.16
23	East side Twelfth street, between C and D SE.	Work on streets and avenues, southeast section.								107.01
26	No. 10 engine house, Maryland avenue, between Thirteenth and Fourteenth streets NE.	New engine house, northeast section.		292						666.58
28	Dupont Circle NW	Repairs to concrete pavements.								53.81
Total.....			18	292	128	5,171	317	195	1,789	10,315.50

Statement marked F gives a list of work done for parties requesting driveways, etc., which are for their sole benefit, the total cost of which is paid by the parties making such requests. This work amounted to \$1,009.26.

STATEMENT F.—*Work done for private parties.*

No.	Location.	For whom done.	Curb set (linear feet).	Curb reset (linear feet).	Cement sidewalk (square yards).	Brick on edge (square yards).	Brick sidewalk paved (square yards).	Grading (cubic yards).
1	Northwest corner New Jersey avenue and G street NW.	Eckington and Soldiers Home R. R. Co.	24					
3	Northwest corner North Capitol and G streets NW.	do	8					
5	Northeast corner Vermont avenue and H street NW.	J. R. McLean			93			
6	2347 Brightwood avenue NW	Elizabeth Federline		8		8		
7	1535 I street NW	J. G. Berret					80	
8	K street, between Third and Fourth SE.	John Miller						140
10	912 Fourteenth street NW	Galloway & Son			4			
11	519 Seventh street NW	Luchs & Bro.			11			
12	1340 Vermont avenue NW	Hill & Johnston			2			
15	1114 Connecticut avenue NW	Geo. E. Kennedy & Sons.					56	
14	1533 I street NW	Chas. B. Howry					14	
15	Southwest corner Ninth street and New York avenue NW.	Barr & Sanner			12			
16	218 Four-and-a-half street SW	E. H. Nichols			24			
17	Northeast corner Twelfth street and Pennsylvania avenue NE.	L. E. Dessez			82			
18	1217 Vermont avenue NW	A. Z. Tyssowski			4			
19	2132 Wyoming avenue NW	Thos. G. Pitcher			1			
20	Columbia R. R. tracks.	Columbia R. R. Co.						
21	Fifteenth street, between G and Maryland avenue NE.	French & Co.						
22	Northeast corner First and D streets NW.	Eckington and Soldiers Home R. R. Co.	20					
23	617, 619, and 621 Florida avenue NW.	Schillinger Paving Co.			18			
29	C street, between Fourteenth and Fifteenth SE.	Weller & Repetti						
30	1906 Fourteenth street NW	Wm. L. Conley			11			
31	Patterson street, between North Capitol and First NE.	Wm. Duffy						
Total			52	8	262	8	150	140

STATEMENT F.—*Work done for private parties—Continued.*

No.	Location.	For whom done.	Flagrelaid (linear feet).	Cobble paved (square yards).	Broken stone spread (cubic yards).	Granite block paved (square yards).	Ditchent (linear feet).	Paving brick furnished.	Cost.
1	Northwest corner New Jersey avenue and G street NW.	Eckington and Soldiers' Home R. R. Co.							\$140. 71
3	Northwest corner North Capitol and G streets NW.	do							44. 55
5	Northeast corner Vermont avenue and H street NW.	J. R. McLean							134. 10
6	2347 Brightwood avenue NW	Elizabeth Federline							9. 47
7	1535 I street NW	J. G. Berret							48. 57
8	K street, between Third and Fourth SE.	John Miller	20	5					44. 25
10	912 Fourteenth street NW	Galloway & Son							5. 27
11	519 Seventh street NW	Luchs & Bro.							16. 10
12	1340 Vermont avenue NW	Hill & Johnston							3. 58
13	1114 Connecticut avenue NW	Geo. E. Kennedy & Sons.							10. 21
14	1533 I street NW	Chas. B. Howry							9. 06
15	Southwest corner Ninth st. and New York avenue NW.	Barr & Sanner							20. 66
16	218 Four-and-a-half street SW.	E. H. Nichols							34. 54
17	Northeast corner Twelfth street and Pennsylvania avenue NE.	L. E. Dessez							118. 14
18	1217 Vermont avenue NW	A. Z. Tyssowski							6. 41
19	2132 Wyoming avenue NW	Thos. G. Pitcher							2. 03
20	Columbia R. R. tracks	Columbia R. R. Co.			63				144. 37
21	Fifteenth street, between G and Maryland avenue NE.	French & Co.				10			9. 24
22	Northeast corner First and D streets NW.	Eckington and Soldiers' Home R. R. Co.							137. 35
23	617, 619, and 621 Florida avenue NW.	Schillinger Paving Co.							26. 27
29	C street, between Fourteenth and Fifteenth SE.	Weller & Repetti					192		10. 75
30	1906 Fourteenth street NW.	Wm. L. Conley							15. 58
31	Patterson st., between North Capitol and First NE.	Wm. Duffy						870	9. 05
Total			20	5	63	10	192	870	1, 009. 26

The following is a statement of the number of square yards and the cost of all plumbers' cuts made in improved streets during the year ended June 30, 1895:

Character.	Feet.	Number.	Square yards.	Cost.
Granite block		133	815. 89	\$843. 53
Asphalt block		115	569. 27	769. 50
Cobblestone		225	1, 276. 58	514. 47
Vitrified brick		53	165. 59	223. 55
Macadam		101	620. 72	744. 86
Sheet asphalt		330	944. 10	2, 832. 30
Granolithic		11	29. 76	42. 85
Ordinary brick		14	57. 94	14. 49
Flagging reset	194	1		15. 52
Total	194	983	4, 479. 85	6, 001. 07

The following cuts have been repaired and charged to the appropriations specified :

Appropriation.	Number.	Square yards.	Cost.
Sewer department.....	136	5,549.28	\$2,206.18
Current repairs, streets, avenues, and alleys. (Repairs over sewer cuts).....	532	18,531.80	8,108.05
Repairs to concrete pavements.....	2	7.16	7.50
Street lighting.....	2	2.17	2.68
Improvements and repairs northwest section.....	1	10	7.00
Water department.....	379	7,301.16	5,905.67
Total.....	1,052	31,401.57	16,237.08

The following cuts have been repaired and charged to the deposits specified :

Depositor.	Character.	Number.	Square yards.	Cost.
Washington Gas Light Co.....	Sheet asphalt.....	103	464.18	\$1,392.54
	Granite block.....	31	337.93	439.31
	Asphalt block.....	26	188.89	187.50
	Vitrified brick.....	7	72.34	97.66
	Ordinary brick.....	1	24	6.00
	Cobblestone.....	9	122.32	55.00
	Macadam.....	10	52.75	68.58
Total.....		187	1,212.41	2,246.59
U. S. Electric Lighting Co.....	Sheet asphalt.....	30	110.04	330.12
	Vitrified brick.....	2	25.75	34.76
	Granite block.....	12	182.24	246.02
	Asphalt block.....	5	110.59	149.29
	Cobblestone.....	4	30.58	13.76
	Granolithic.....	1	5.77	8.31
Total.....		54	464.97	782.26
Superintendent Public Buildings and Grounds.....	Granite block.....	1	3.11	3.98
Eckington and Soldiers' Home R. R. Co.....	Sheet asphalt.....	4	28.53	41.16
	Vitrified brick.....	1	1.27	1.82
Congressional Library.....	Sheet asphalt.....	1	5.09	7.00
	Granite block.....	1	1.13	2.36
Columbia Railway Co.....	Vitrified brick.....	1	12.19	14.17
	Resetting curb.....	147.75		55.65
Metropolitan Railway Co.....	Sheet asphalt.....	1	11.30	13.72
	Ordinary brick.....	1	398.72	97.93
Total.....		12	461.34	237.79

<sup>1</sup> Feet.

The following is a report of the cost of repairs made to cuts in improved pavements during the fiscal year ended June 30, 1895, giving the name and amount charged the respective registered plumbers :

Anadale, John A.....	\$69.03	Baur, J. A.....	\$5 19
Albinson, James E.....	57.07	Carmody, John.....	122.53
Anderson, James F.....	13.27	Caverly, Edward, & Co.....	20.01
Atchison, J. I.....	45.28	Campbell, William P.....	2.25
Artz, Samuel.....	61.76	Curtin, A. G.....	8.43
Ashton, George W.....	134.46	Clarke, J. B.....	54.66
Bond, James D.....	63.32	Caverly, R. B.....	106.79
Bowden & Buechler.....	36.18	Clark, T. C.....	21.73
Brill & Hayden.....	1.35	Chesapeake and Potomac Tele-	
Brown, Thomas.....	59.10	phone Co.....	950.22
Brooks, R. C.....	60.05	Connor, J. M.....	38.25
Berry, W. O.....	17.20	Cunningham, James.....	42.70
Butler, John A.....	.75	Devereux & Gaghan.....	36.11
Berry & Roys.....	6.75	Dent, A. S.....	106.34
Barrick, Charles E.....	79.85	Duffy, William.....	41.28
Barnard, Ed.....	14.16	Dougherty, W. W.....	2.48
Beuter, M. A.....	23.78	Donaldson, T. W.....	30.25
Bouis, William R.....	13.98	Daly, Peter.....	21.11
Bontz & Stutz.....	7.44	Daly, Frank, & Co.....	103.76

Dorsett, C. A. ....	\$40. 27	Musson, John W. ....	\$32. 55
Edward & Myers. ....	8. 10	Myers, E. B. ....	19. 89
Enright & Newmeyer. ....	10. 34	Nolan, James. ....	27. 22
Fitzgerald, R., & Son. ....	41. 08	Niland, P. T. ....	29. 15
Foley, Thomas F. ....	27. 33	Noonan, T. V. ....	8. 10
Georgetown Gas Light Co. ....	275. 01	O'Donnell, D. A. ....	52. 89
Green, George A. ....	62. 42	O'Hagan, James. ....	20. 75
Gorman, Edward. ....	46. 83	Power, Jno. A., & Co. ....	153. 00
Gallagher, B. D. ....	3. 23	Pruitt, Norman. ....	43. 11
Goss, William E. ....	4. 35	Purcell, J. C. ....	. 90
Hannan, Daniel. ....	28. 94	Quinter, Jos. R. ....	194. 28
Horan, James F. ....	100. 09	Quilter, Thos. F. ....	63. 54
Hannan, Ed. J. ....	44. 68	Reynolds, Wm. ....	41. 98
Herbert, Joseph A. ....	49. 67	Rodbird, Jno. E. ....	75. 61
Harrison, James T., & Son. ....	70. 00	Rothwell, Wm. ....	9. 75
Hutchins, George E. ....	6. 06	Robertson, Jas. P. ....	49. 17
Hurley, John W. ....	32. 53	Roache, James. ....	43. 27
Humphrey, Thomas. ....	9. 38	Schaeffer, Geo. F. ....	3. 98
Harrison, James T., jr. ....	27. 12	Spearing, S. J. ....	6. 41
Hannan, P. F. ....	69. 56	Shepherd, A. R. ....	23. 74
Hill & Prigg. ....	36. 35	Shedd, S. S., & Bro. ....	78. 27
Hurney, Thomas. ....	7. 61	Sullivan, D. P. ....	14. 98
Hannan & Co. ....	87. 60	Sherwood, Saml. H. ....	56. 03
Harper, J. William. ....	18. 82	Schlosser, J. G., & Co. ....	41. 83
Krause, John. ....	46. 04	Soper, B. A. ....	42. 92
Keppel John. ....	13. 95	Slattery, Ed. D. ....	. 60
Kennedy & Schaefer. ....	29. 31	Tilp, Fred'k. ....	78. 84
Kock, William. ....	43. 22	Thorn, Chas. G. ....	140. 40
Koehane, D. ....	29. 01	Thomas, W. A. ....	13. 15
Lanahan, J. B. ....	34. 66	Thompkins, E. H. ....	198. 38
Lockhead, Charles. ....	109. 59	Thomas, Wm. ....	1. 57
Lockhead, James. ....	59. 76	Umbau, C. F. ....	33. 85
McIntosh, G. T. ....	14. 69	United States Electric Lighting	
McBee, R. ....	15. 26	Co. ....	703. 49
McAvoy, George F. ....	62. 95	Vandegrift, Wm. P. ....	17. 00
McMahon, J. J. ....	8. 29	Ward, Wm. N. ....	43. 35
McShea, W. A. E. ....	5. 25	Williamson, D. S. ....	27. 06
Moran, John. ....	54. 29	Whelan, Wm. ....	67. 37
Mills, R. ....	32. 51	Wall, Wm. ....	18. 08
Marsden, F. L. ....	14. 88	Wolters, F. A. ....	36. 53
Maisak, Geo. H. ....	35. 62	Work, Wm. J. ....	51. 56
Mills & Kibbey. ....	20. 93	Washington Gas Light Co. ....	2, 246. 59
Murphy, D. J. ....	78. 91		
Mithell, John. ....	35. 10		
Mallet, E., jr. ....	41. 47		
		Total. ....	9, 183. 07

Respectfully submitted.

Maj. CHAS. F. POWELL,

*Engineer Commissioner, D. C.*

(Through Capt. G. J. Fiebeger.)

## REPORT OF SUPERINTENDENT OF ROADS.

WASHINGTON, D. C., August 9, 1895.

SIR: I have the honor to submit herewith a statement of expenditures made by my department from various appropriations during the fiscal year 1894-95 on county roads and suburban streets.

*Expenditures for repairing county roads and suburban streets, fiscal year 1894-95.*

Name of road.	Amount expended.	Name of road.	Amount expended.
CENTRAL SECTION.		CENTRAL SECTION—continued.	
Argyle mill road.....	\$2,001.80	Farragut street.....	\$2.59
Blair road.....	54.20	Meridian street.....	26.00
Brentwood road.....	375.09	Burns street (Brookland).....	13.88
Brown str. et.....	39.28	Queen street (Brookland).....	65.12
Bohrer street.....	3.37	Twenty-second street (Langdon).....	5.27
Carroll road.....	32.13	Cincinnati street (Langdon).....	5.28
Central avenue.....	10.25	Oak avenue (Takoma).....	10.50
Champlain avenue.....	2.84	Providence street (Brookland).....	249.36
Fifth street extended.....	.94	Columbia road.....	2,845.13
Fifteenth street extended.....	9.75	Duncan street (Brookland).....	74.50
Grant street.....	39.50	Material, general use.....	1,070.28
Harwood road.....	89.76	Detroit street (Langdon).....	15.83
Howard street.....	1.50	Twenty-fourth street (Langdon).....	14.15
Lamar street.....	6.75	Howard avenue.....	90.36
Lydecker avenue.....	38.71	Emporia street (Langdon).....	20.95
Military road.....	19.42	Twenty-sixth street (Langdon).....	5.12
Morgan street.....	18.31	Fourteenth street road.....	2,833.89
Mount Olivet road.....	594.84	Marshall street.....	6.63
Ninth street extended.....	15.50	Wilson street.....	5.75
Oak street.....	25.50	Spring street (Takoma).....	5.88
Park street.....	95.51	Trinidad avenue.....	13.25
Pomeroy street.....	205.37	Binney street.....	115.62
Princeton street.....	53.49	Columbia street.....	5.62
Prospect street.....	13.00	Superior street.....	1.68
Queens Chapel road.....	11.60	Quarry roads.....	74.28
Riggs road.....	771.59	Seventh street NE. (West Brookland).....	7.75
Sargent road.....	63.62	Cincinnati street NW.....	82.13
Sheridan avenue.....	6.36	Montgomery street NE.....	405.12
Shepherd road.....	202.08	Bunker Hill road.....	552.11
Sixteenth street extended.....	1,401.80	Brightwood avenue.....	4,046.96
Sixth street extended.....	3.12	Woodley Lane road.....	43.84
Spring street.....	11.51	Lincoln avenue.....	655.13
Thirteenth street extended.....	571.29	Linnean Hill road.....	534.51
Trumbull street.....	1.63	Rock Creek Church road.....	456.07
Whitney avenue.....	176.53	Bladensburg road.....	577.69
Klingle road.....	2.72	Benning's road.....	947.96
Eighth street extended NW.....	20.93	First street extended NW.....	159.79
Howard street.....	4.25	Blacksmithing.....	237.50
Sherman avenue.....	28.49	Miscellaneous labor.....	1,745.61
Center street.....	22.16	Piney Branch road.....	92.90
Keneaw avenue.....	24.21	Chestnut avenue (Takoma).....	23.50
Ontario avenue.....	1.67	Holmead avenue.....	20.25
Michigan avenue.....	16.09	Vine street (Takoma).....	5.25
North Capitol street extended.....	56.38	"A" road.....	15.75
California avenue.....	11.50	Nineteenth street extended NW.....	11.07
Connecticut avenue.....	14.80		
Seventeenth street extended.....	35.67	Total.....	26,931.16
Massachusetts avenue extended.....	29.37		
Maple avenue.....	19.75	WESTERN SECTION.	
Magnolia avenue.....	22.87	Brookville road.....	161.37
Wyoming avenue.....	38.75	Broad Branch road.....	150.37
Quincy street.....	29.95	Canal road.....	302.21
Twelfth street extended NE.....	1.75	Chain Bridge.....	943.59
Wallace street (Brookland).....	7.87	Chappell road.....	81.69
Elm street.....	35.87	Daniels road.....	5.01
Eighteenth street extended.....	1.54	Falls road.....	23.53
Randolph street.....	45.68	Klingle road.....	39.25
S street extended.....	46.06	Loughboro road.....	205.52
Le Droit avenue.....	3.25	Military road.....	237.44
Harwood avenue (Le Droit Park).....	8.93	Murlock mill road.....	71.81
Seaton street.....	25.68	New Cut road.....	372.57
T street extended.....	212.72	Pierce Mill road.....	180.46
Spruce street.....	20.34	Red Lane.....	2.12
M street extended.....	61.07	Ridge road.....	73.92
Fourth street extended NW.....	1.50	Rock Creek Ford road.....	112.16
Frankfurt street (Brookland).....	438.98	Tunlaw road.....	308.06
Fort street (Brookland).....	441.10	Blacksmithing.....	68.85
Hartford street (Brookland).....	23.25	Back street.....	20.45
Capitol street (Ivy City).....	11.25		



*Expenditures for repairing county roads and suburban streets, etc.—Continued.*

Name of road.	Amount expended.	Name of road.	Amount expended.
<b>WESTERN SECTION—continued.</b>		<b>EASTERN SECTION—continued.</b>	
Tenleytown road .....	\$711.21	Stephenson avenue .....	\$69.25
Prospect street (Reno) .....	2.12	Suit road .....	38.00
Pierpont place .....	28.96	Sumner street .....	5.50
Milwaukee street .....	32.49	T street (Hillsdale) .....	19.00
Thirty-fifth street extended .....	48.25	Washington street .....	27.53
Thirty-fourth street extended .....	25.25	Wheeler road .....	180.67
Thirty-sixth street extended .....	309.73	Material, general use .....	30.07
Material, general use .....	232.47	Maple avenue (Lincolnvillle) .....	18.37
Elliott place .....	21.75	Shannon place .....	2.50
Miscellaneous labor .....	648.34	Washington street (Lincolnvillle) .....	12.25
Connecticut avenue extended .....	454.40	Bell street (Lincolnvillle) .....	46.96
Hartford street .....	51.62	Lincoln avenue (Lincolnvillle) .....	4.09
Grant road .....	230.61	Bowen street (Lincolnvillle) .....	29.44
Nebraska avenue .....	899.47	Howard avenue .....	18.91
Woodley Lane road .....	374.37	Johnson street .....	12.75
<b>Total .....</b>	<b>7,475.42</b>	Maple avenue (Anacostia) .....	29.49
<b>EASTERN SECTION.</b>		Navy Place avenue .....	10.87
Adams street .....	43.25	Bridge street .....	8.00
Bowen road .....	119.05	Pomeroy street .....	82.89
Central avenue .....	172.70	Taylor street .....	24.25
Fillmore street .....	99.84	Pennsylvania avenue extended .....	117.94
Giesboro road .....	622.84	High street .....	6.75
Good Hope road .....	163.48	School street .....	8.25
Hamilton road .....	124.11	Madison street .....	23.25
Jackson street .....	49.70	Miscellaneous labor .....	618.08
Jefferson street .....	152.66	Avelon street .....	10.38
Monroe street .....	33.37	Lincoln street (Anacostia) .....	2.50
Morris road .....	195.59	Minnesota avenue .....	92.95
Naylor road .....	118.75	Douglas avenue .....	19.00
Pierce street .....	3.42	Nichols avenue .....	153.17
Polk street .....	3.59	Bennings road .....	354.30
Race Course road .....	17.00	Franklin street .....	15.37
Ridge (McLain) road .....	33.25	Grant street .....	4.08
Sheridan avenue .....	146.77	Harrison street .....	167.54
Sheriff road .....	72.37	Livingston road .....	112.57
Stanton avenue .....	130.78	Anacostia road .....	679.84
		Blacksmithing .....	97.80
		<b>Total .....</b>	<b>5,402.11</b>

**SUMMARY.**

Central section .....	\$26,931.16
Western section .....	7,475.42
Eastern section .....	5,402.11
Outstanding bills .....	116.20
<b>Total .....</b>	<b>39,924.89</b>
Amount of appropriation .....	40,000.00
Expended .....	39,924.89
Balance .....	75.11

Under the appropriation for current repairs to county roads, the principal expenditures were on Argyle Mill road, for grading and graveling from Rock Creek eastward; Mount Olivet road, macadamizing and graveling; Riggs road, graveling; Sixteenth street between Columbia road and Piney Branch, grading, widening, and macadamizing (between Kenesaw avenue and Grant street) and graveling portion between Howard avenue and Piney Branch; Thirteenth street extended NW., grading and graveling; Frankfort street, Brookland, graveling; and Fort street, Brookland, graveling; Columbia road, from Florida avenue northward, widening and macadamizing; Fourteenth street road between Park street and Brightwood, graveling; Montgomery street NE., grading; Brightwood avenue north of Rock Creek Church road, macadamizing and graveling; Lincoln avenue, graveling; Linnean Hill road, grading and graveling; Rock Creek Church road, graveling and general repairs; Bladensburg road, graveling; Bennings road, graveling; Giesboro road, graveling and general repairs; Anacostia road, graveling; Chain Bridge road from Conduit road eastward, grading and graveling; Tenleytown road, general repairs; Thirty-sixth street (Oak View) grading; Connecticut avenue, widening and general repairs; Nebraska avenue, grading and graveling between Loughboro and Tenleytown roads; Woodley Lane road, graveling. On remaining roads general repairs were made from time to time, gutters cleaned, stone raked off, etc.

Expended from appropriation, Sixteenth street extended, etc., 1895..... \$9,998.06  
 Expended from appropriation, Sherman avenue, 1895..... 9,991.90

Under appropriation for Sixteenth street, etc., Sixteenth street, between Florida avenue and Morris street; Central street, between Superior and Erie, and portions of Erie street and Ontario avenue were graded. Sherman avenue, between Grant street and Whitney avenue, was graded, macadamized, and graveled.

Expended from appropriation high service, water department, 1895, repairing out Connecticut avenue..... \$165.62  
Expended from appropriation assessment and permit work, 1895..... 1,384.65

Under assessment and permit work, plank walks, 4 feet wide, of Virginia pine lumber, were laid in Brookland, West Brookland, Avalon Heights, and Le Droit Park, amounting in all to 5,305 linear feet.

Brick sidewalk, amounting to 693 square yards was laid on Seventh street extended NW., front of No. 1927 to 2041.

*Expenditures from appropriation assessment and permit work, 1895.*

UNDER ASSESSMENT SYSTEM.

Location.	Plank walk, 4 feet wide.	Brick side walk.	Cost.
Erie street, Meridian Hill, between Central avenue and Fifteenth street NW.....	<i>Lin. ft.</i> 912	<i>Sq. yds.</i>	\$143.37
Messmore street, Meridian Hill, between Erie and Huron streets.....	1,001.7		150.22
Dover street, between Eleventh and Twelfth streets, Brookland.....	395.2		64.74
Concord street, between Twelfth and Thirteenth streets, Brookland.....	616.1		96.51
Moore's Lane, Le Droit Park, from Elm street north.....	276		43.56
Dover street, between Thirteenth and Fourteenth streets, Brookland.....	584.3		90.20
Galveston (Austin) street, in front of block 27, Brookland, and lots 13 and 14, block 3, South Brookland.....	503.1		93.17
Detroit street, from railroad to Twenty-ninth street, Avalon Heights.....	758.6		135.44
Seventh street extended NW., front Nos. 1927 to 2041.....		693	420.57
Columbia road, between Florida avenue to Le Roy Place, grading sidewalk, etc.....			146.87
Total.....			1,384.65

REGULAR PERMIT WORK.

Location.	Plank walk, 4 feet wide.	Cost.
Front lots 1 to 14 (inclusive), block 3, West Brookland, and on Seventh street NE., along lot 6, block 2.....	<i>Lin. ft.</i> 640	\$99.75
Alleys in Griswold's subdivision, Anacostia.....		468.70
Total.....		568.45
Miscellaneous labor.....		27.00
Material, general use.....		34.24
Total.....		2,014.34

Very respectfully,

The ENGINEER COMMISSIONER.  
(Through Capt. G. J. Fieberger, U. S. A.)

GEO. N. BEALE,  
*Superintendent of Roads.*

REPORT OF ENGINEER OF BRIDGES.

WASHINGTON, D. C., July 1, 1895.

MAJOR: I have the honor to submit the following annual report for the fiscal year ended June 30, 1895:

ORDINARY CARE OF BRIDGES, 1895.

Under this appropriation bridge keepers were maintained at the Aqueduct Bridge over the Potomac River (No. 7); the Pennsylvania Avenue Bridge over the Eastern Branch (No. 54), and the Navy-Yard bridge (No. 55); one keeper being located at each

of the first two, and two at the last-named structure, the operation of the draw requiring that number. At the present time such alterations have been made in the draw mechanism as will permit of its operation by one man and the services of one of these two bridge keepers will be dispensed with hereafter. On the recommendation of this office, dated April 3, 1895, the Commissioners of the District of Columbia ordered that the draw of the Navy-Yard Bridge be opened for the passage of water craft only between the hours of 9 a. m. and 4 p. m.

Inspector R. D. McClure has made intelligent and diligent general inspection of all District bridges and culverts throughout the year.

Acting as special officers the bridge keepers have arrested and secured the conviction of a number of violators of the police regulations respecting travel, etc., over public bridges.

#### STATEMENT OF APPROPRIATION.

Amount of appropriation.....	\$5,000.00
Amount expended.....	4,645.72
Balance.....	354.28

#### CONSTRUCTION AND REPAIR OF BRIDGES.

The work under this appropriation was principally confined to repair work, the limited amount of funds not permitting any new construction. The bridges on Blagden Mill road over Broad Branch (No. 19), on Pierces Mill road over Rock Creek (No. 20), and on N street SW. over James Creek Canal (No. 40), were entirely rebuilt, as the old structures were beyond repair. Bridge No. 19 was rebuilt in wood by day labor. The new steel superstructure of bridge No. 20 was furnished by the Shiffier Bridge Company, of Pittsburg, Pa., under contract No. 1933, dated August 21, 1894, and erected and the floor laid by this department by day labor. In the reconstruction of this bridge the floor level was raised about 6 feet, greatly benefiting the grade of the east approach. The steel superstructure of bridge No. 40 had been purchased during the fiscal year 1894, except the posts and brace frames. These last were purchased by letter proposal, and the bridge erected and the floor laid by day labor. All of these reconstructed bridges were well painted. In the case of structures such as the ones described, our experience indicates that an economy results from purchasing metallic superstructures and erecting them ourselves rather than contracting for them erected.

The bridges on Klinge Ford road over Rock Creek and on Connecticut avenue over Rock Creek were painted during the year, the first by day labor, the second under contract No. 2065, dated March 22, 1895, with Linskey & Son of this city. The superstructure of the bridge on Blagdens Mill road over Rock Creek was raised about 4 feet, incident to the improvement of the general grade of the road in that locality.

The reconstruction of the draw of the Navy-Yard bridge was completed, such additional details being added as would insure the possibility of its operation by a single keeper under almost all conditions of tide and wind. The remainder of the appropriation was expended in repairs to the various bridges and culverts under my charge, as more fully set forth in the following table. The unexpended balance of the appropriation of \$10,000 was \$10.71.

It seems proper to record here that the submarine repairs to the piers of the Aqueduct Bridge over the Potomac were executed during the year under the supervision of the Secretary of War to the extent of the appropriation made for the purpose. All the piers were repaired to some extent and pier No. 4 largely rebuilt at its upstream end. In the execution of this latter work the box girders placed on this pier last year, to transfer the weight of the upstream trusses to the center of the pier and insure the integrity of the superstructure in event of the pier's failure, were removed and brought ashore, their duty being provided for by a timber construction resting on the new cofferdam.

*Expenditures for construction and repair of bridges, 1895.*

Order.	Bridge.	Amount.	Remarks.
172.....	55.....	\$428.17	Reconstruction of drawspan, building cofferdam, etc.
173.....	36.....	360.73	Laying new floor.
174.....	37.....	46.32	Do.
175.....	14.....	352.92	Raising bridge and repairing masonry.
176.....	20.....	2,364.10	Reconstructing bridge, labor and material.
Contract 1933.....	20.....	1,607.29	Contract for steel superstructure.
	20.....	36.86	Inspection of steel superstructure.
177.....	19.....	328.48	Reconstructing bridge.
178.....	31.....	1.00	Repairing sidewalk.
180.....	1.....	26.25	Repairing floor.
181.....	54.....	340.69	Do.
182.....	40.....	1,481.80	Rebuilding bridge.
183.....	Culvert.....	11.60	Replacing old bridge on Central avenue with pipe.
184.....	25.....	2.75	Repairing floor.
	30.....	775.00	Painting under contract.
Contract 2065.....	30.....	575.00	Materials for painting.
	30.....	90.00	Inspection.
185.....	30.....	87.10	Minor repairs.
186.....	53.....	28.30	Laying new floor.
187.....	35.....	304.51	Repairing floor.
189.....	26.....	77.38	Do.
191.....	71.....	6.50	Constructing new wooden abutments.
192.....	51.....	10.38	Repairing floor and hand rail.
193.....	Culvert.....	20.95	Repairing hand rail. Canal road, at College Pond.
194.....	do.....	.79	Twenty-sixth and M streets northeast, pipe culvert.
195.....	do.....	186.74	Seventeenth and E streets NE., constructing.
Tools.....	Various.....	39.87	Purchase of tools for general use.
Material.....	do.....	21.86	For general use.
Labor.....	do.....	29.70	Miscellaneous.
Engineer.....	do.....	175.00	Salary of engineer of bridges.
	27.....	189.00	Paint.
Total.....		10,006.44	
Credit.....		17.15	Repayment by Rook Creek Rwy. Co. Bridge No. 30.
Balance.....		9,989.29	

Amount of appropriation.....	\$10,000.00
Net expenditures.....	9,989.29
Balance.....	10.71

Respectfully submitted.

CONWAY BUNT, *Engineer of Bridges.*The ENGINEER COMMISSIONER.  
(Through Capt. G. J. Fiebeger.)

## REPORT OF ENGINEER IN CHARGE OF SUBDIVISION OF LAND.

WASHINGTON, D. C., August 7, 1895.

SIR: I have the honor to submit the following report of work in this department for the fiscal year ended June 30, 1895:

\* \* \* \* \*

Plats of subdivisions under the law of 1888 have been passed upon and recorded in five instances: Garfield Heights, Congress Heights, Mills estate, Girls Portion, and Clermont, about 105 acres in all.

Special surveys have been made for opening Albemarle street, locating streets in West Brookland, for new boundary of Zoo Park at Connecticut avenue, for street lines west of Tenleytown, for Massachusetts avenue extended, and for property lines at Fourteenth street and Spring road. A number of azimuth lines have been located and marked by monuments and subdivisions connected by transit lines with various points of reference. Maps have been made of all these surveys and sketches and plans submitted to this office have been passed upon from time to time.

Respectfully,

WM. P. RICHARDS,  
*Assistant Engineer, Subdivision of Land.*The ENGINEER COMMISSIONER.  
(Through Capt. G. J. Fiebeger.)

## REPORT OF THE PARKING COMMISSION.

WASHINGTON, D. C., July 18, 1895.

SIR: The parking commission have the honor to submit the accompanying paper of the superintendent of parking as their report for fiscal year ending June 30, 1895.

JOHN SAUL,  
WILLIAM SAUNDERS,  
*Parking Commission.*

Maj. CHAS. F. POWELL,  
*Engineer Commissioner.*

WASHINGTON, D. C., July 18, 1895.

GENTLEMEN: I have the honor to submit the following report of the work performed under the supervision of this office during the fiscal year ended June 30, 1895:

One thousand six hundred and forty trees were planted on the streets during the year, the larger portion of which was done in the eastern section of the city. This was an increase of 950 over the number planted last year. About 7,000 seedlings were set out in the nursery, namely, oriental planes, oaks, elms, ginkgos, lindens, poplars, Norway, sugar and silver maples. These are in excellent condition with the exception of those which were removed from the ground taken for the smallpox hospital, the removal of which checked their growth considerably. There is an abundant supply of trees in the nursery of the proper size for planting on the streets, a number of which will have become overgrown if not used in the near future.

In addition to trimming individual trees and rows of trees in various places which needed special attention, this branch of the work was resumed where it was stopped the previous year. M street northwest at Connecticut avenue, and all that part of the northwest section north of M street, was taken systematically and the trees trimmed. Northeast Washington, between East Capital and C streets, inclusive, was also taken, thus leaving the larger portion of the northeast, all of the southeast and southwest sections to be gone over in order to finish the work to the place where it was begun two years ago, on north B street. If this latter named point can be reached during the year 1896, it will have taken three years for the trees of the city to be trimmed in this way.

The first trees planted by the parking commission are getting large and need attention yearly, in the way of trimming and removing the deadwood, also paving around the tree spaces. Unless the appropriations are increased in proportion to the number of trees, it will be impossible to keep the trees in good condition. The entire number of trees should receive some attention yearly, which is impossible with the limited annual appropriations. With an appropriation of \$15,000, and 75,000 trees, only 20 cents could be expended on each tree, which would not trim them and keep the ground around their roots in good condition, to say nothing of the removal of trees, the planting of more trees, paving, and purchasing of lumber for boxes, stakes, and wire netting, all costly and absolutely necessary items for the work.

The usual care was bestowed upon the cultivation of young trees, which was very necessary on account of the dry weather at the beginning of the year.

There are a number of trees which crowd each other at the corners of intersecting streets, and others which stand so close to street lamps as to seriously interfere with the dissemination of light. These could well be spared, and I think should be removed as soon as possible. In this connection I would recommend the removal of every box elder tree from the streets and the replacing of them by a different variety of trees. Those on L, N, and S streets northwest should be removed first, as they are the most inferior of their kind, and a sufficient amount of money has been spent upon them in the last eight or ten years in clearing them of caterpillars alone to have replaced them. They are also very unsatisfactory to the people who reside on the streets where they are planted, as they are annually infested with worms.

Five thousand two hundred and seventy-six trees were wired. All the trees in the northwest section of the city between North Capitol and Eighteenth streets are now protected, except those in unexposed places and some box elders which were not considered worth the cost. The wire used was purchased at a cost of \$1 per rod, and the cost of placing it around the trees made the cost per tree about 33 cents. There are yet many thousands of trees which require this wire protection. These trees have cost money to bring them to their present condition, and unless protected are liable to great damage if not destruction. If \$5,000 could be obtained for this purpose, with the reduced price of wire netting, a very large portion of the trees now

unwired could be placed out of danger. Surely the trees of this beautiful city are well worth this expenditure, and I strongly recommend that this sum be asked for this purpose. The total number of trees now protected is about 31,700.

Eighteen hundred new tree boxes were made and used.

Six hundred and thirty-nine communications were referred to the parking commission, examinations made and reports rendered, but some of the work asked for in these communications has not yet been reached.

The police department reported 438 casualties which were given immediate attention.

Caterpillars appeared on the trees in large numbers, but have been removed without leaving any visible trace except on some of the most inferior Negundos. These pests usually appear during the month of June, at a time when the funds of the parking commission are about exhausted. Several times have they done considerable damage before they could be successfully attacked for want of money. The elm beetle frequently attacks the elm trees during the month of May, and, while they disfigure the foliage for a time, do no lasting damage. The two last-named matters, occurring at a time so near the end of the year, and from the fact that it can not be definitely told whether or not they will appear, it is not considered wise to defer the expenditure of so large a sum as would be required for their destruction, on account of the uncertainty of their appearance, and the money is always needed for other purposes at the end of the year. As a remedy for these, and the removal of broken limbs, blown-down trees, etc., the result of storms which are liable to occur at any time, I recommend that a sum of \$3,500 be asked to be appropriated as an emergency fund for the parking commission, to be used only for these purposes, if required.

The report for the year 1894 shows the number of trees on the streets to be.	74,063
Planted during the year.....	1,640
	<hr/> 75,703
Trees removed.....	580
	<hr/> 75,123
Total trees now on streets.....	<hr/> <hr/> 75,123
The report for the year 1894 shows the number of trees wired to be.....	26,463
Wired during the year.....	5,276
	<hr/> 31,739
Total numbered wired.....	<hr/> <hr/> 31,739
Appropriation for 1895.....	\$15,000.00
Expended for labor, supervision of work, cart hire, etc.....	\$12,460.93
Purchase of materials, repairs to tools, etc.....	2,535.07
	<hr/> 14,996.00
Balance unexpended.....	4.00

Respectfully submitted.

TRUMAN LANHAM,  
*Superintendent Parking Commission.*

The PARKING COMMISSION.

## REPORT OF GENERAL INSPECTOR.

WASHINGTON, D. C., August 14, 1895.

SIR: I have the honor to submit report of the operations of this office for the fiscal year ended June 30, 1895.

The assignment of duties for the year was as follows:

The supervision of street and steam railroads, involving periodical inspections looking to features of maintenance, equipment, and the general conduct of the roads as affected by charter provisions and municipal regulations thereunder.

The supervision of telegraph, telephone, and electric light overhead lines and underground conduits, involving regular inspections looking to safe and proper maintenance, the selections of routes, the designation of points for the location of poles, and an oversight of the stringing of wires.

The investigation of claims and damage suits against the District on account of injury to person or property, the examination and report upon communications and complaints, requiring information upon questions of varied description concerning matters under municipal control, and the inspection of sidewalks subject to injury on account of building operations.



## STEAM RAILROADS.

The situation respecting the steam surface tracks remains in statu quo, while the inconvenience and dangers resulting from the grade crossing and unprotected portions of the tracks lying in the line of the public streets are an ever-fruitle subject of discussion. The Baltimore and Ohio road has added no protection in the way of fencing during the year; in consequence long stretches of unprotected track, lying in and across the public streets on an approximate grade therewith, pass through populated localities, affording no security whatever against accident. The danger of this condition of affairs needs no comment, and if existing law can not abate it, legislation should be sought at the earliest practical moment that will. It would seem, however, that the requirement of fencing, so far at least as the right of way proceeds upon public property, is within the scope of present police power.

The maintenance of crossings on both branches of this road to the District line has noticeably improved, but some within the city are yet to be brought up to the required standard, and the company is now in receipt of orders to that effect.

The Baltimore and Potomac road, within the year, has inclosed its tracks along Sixth street as far as the station, and also of its most dangerous piece of road along Maryland avenue, between Sixth and Seventh streets, so that there remains to be fenced the tracks between Ninth street and the Long Bridge, for which the company now has a permit, and between Third and South Capitol streets east, which latter are, in part, above grade. Additional protective appliances and flagmen have also been provided at the New Jersey avenue, the Sixth and Virginia avenue, and the Sixth and Maryland avenue crossings, and, it is believed, that these crossings are now as well protected as is possible under the circumstances. The maintenance of crossings throughout this road has been of the usual high standard.

The Thirteenth street crossing of the Southern Railroad also received attention during the year, and safety gates were erected and manned in accordance with the recommendation.

## STREET RAILROADS.

Under this head, considerable time and study has been given to the question of safety fenders, suitable for use on the cars of the rapid-transit roads, the outcome of which has been the adoption of designs combining the action of what is styled "the front pick-up and wheel-guard fender," the practical merit of which has now been fully demonstrated and its capacity for saving life proven beyond question.

The roads having a full equipment as required by the fender regulations are in the order of compliance the following: The Rock Creek, the Eckington and Soldiers' Home, the Georgetown and Tennallytown, and the Brightwood. The Ninth street electric line has a regulation equipment upon such of its new cars as are in operation. The grips of the Washington and Georgetown and Columbia roads are not as yet fully equipped as required by the regulations.

Other events of interest occupying the time and attention of the office in the way of general supervision requiring compliance with permit conditions have been the completion and successful operation of the Columbia cable and Ninth street underground electric roads, both advantageous changes over previous conditions, the one as having substituted cable, the other electric for horsepower, and each alike dispensing with a considerable area of cobblestone paving, while the Ninth street construction has been of a special interest as demonstrating the feasibility of operating street railways by means of underground electric conductors. The work of construction of both these roads was expedited in the most workmanlike manner, and there was no real cause of complaint from any source, the contractor and his assistants in every instance showing a most willing disposition to comply with the orders of the Engineer Commissioner. The track surface of these new roads, barring slight defects in the paving of the Columbia tracks, is excellent, while the companies as a whole have given attention to paving and track surfacing, and good conditions of maintenance prevail as a rule.

## OVERHEAD LINES AND CONDUITS.

This office was relieved of the supervision of underground constructions early in the year, and the sewer department was given control of this branch of work. There was also one overhead line less to be looked after, the old dilapidated Rapid Transit Line having been removed from the streets under the direction of the superintendent of streets. Of the remaining companies operating overhead lines, the Chesapeake and Potomac Telephone Company alone has maintained a respectable standard of repairs, or made any effort in the way of improving distribution service, the other companies having done nothing except as absolute safety demanded or street improvements necessitated.

The work done by the Chesapeake and Potomac Telephone Company consisted in the replacement of old with new, stronger, and taller poles, the stringing of copper in place of iron wires, and uniting lines, the most extensive work of this character being done on the Benning and Brentwood roads, extending as far as the District line. Owing to the lack of attention given to features of maintenance by the other companies, their lines of necessity are daily growing weaker, the poles in many instances have rotted at the base, and unless early legislation shall be secured compelling the companies to operate underground, loss of life and injury to property are likely to result. The lines especially noted as being in bad condition were the Western Union Company's line along Seventh street N.W. and Brightwood avenue, and the Postal Company's line, which traverses the city by way of Virginia avenue, I street south, and Thirteenth street east. This latter is an abandoned line, and there appears to be no excuse for its existence, except that an occasional pole is utilized for carrying a District wire. In this connection, I would again urge that all poles within the District, including District poles, be marked with the name or initials of the operating companies, as this not only greatly facilitates inspection, but affords an opportunity for the police to communicate directly with the responsible parties in the event of the necessity for immediate action.

#### CLAIMS AND DAMAGE SUITS.

Under this head, in addition to time occupied in investigation, there was the usual consumption of time in attendance upon the trial of causes. The method of investigation pursued was the same as in times past, the object being to ascertain the truth and facts as admitting of an equitable adjustment of damages. The number of cases at law investigated, involving damages for injury to person, was 8. The number of claims investigated, involving compensation for injury to property, was 5. The number of communications acted upon, showing in addition to work of general supervision that of a particular character occupying the attention of the office, was 360. The number of applications for inspections of sidewalks, requiring from one to three inspections each, was 284. The force employed and compensation received per annum was as follows: One general inspector and two assistant inspectors, \$1,200 each.

Very respectfully,

L. P. BRADSHAW,  
*Acting General Inspector.*

The ENGINEER COMMISSIONER.  
(Through Capt. G. J. Fieberger.)



## REPORT OF THE INSPECTOR OF ASPHALTS AND CEMENTS.

WASHINGTON, August 16, 1895.

SIR: I have the honor of presenting my report for the fiscal year ended June 30, 1895. The work performed by this office may be summarized as follows:

## Hydraulic cements:

Natural, brands 10, lots 429, samples.....	3, 728
Portland, brands 21, lots 77, samples.....	1, 433
	<hr/> 5, 161

## Asphalts:

Crude Trinidad.....	17
Refined asphalt.....	15
Residuum oil.....	33
Asphalt cement.....	3
Sands for asphalt surface.....	25
Surface mixtures.....	139
Asphalt blocks.....	2
Old pavements.....	11
Natural asphalts.....	7
Miscellaneous.....	15
	<hr/> 267

## Sands, gravel, etc

Aqueduct.....	16
Public wells.....	194
Miscellaneous.....	14
	<hr/> 224

## Miscellaneous.

	<hr/> 22
	<hr/> 5, 701

## ASPHALTS.

*Crude Trinidad asphalt.*—The crude asphalt received during the year has run quite uniform in quality (with the exception of two cargoes), varying less than 1 per cent in bitumen. The average bitumen per cent of the cargoes received during the past year is 52.9 per cent.

*Asphalt cements.*—Penetrations of the cement used each day have been made at the works, with the results following:

	Cranford Paving Co.	Barber Paving Co.	Thomas Paving Co.
Highest penetration, 77° F.....	80	72	94
Lowest penetration, 77° F.....	62	61	175
Average penetration, 77° F.....	73	69	85

<sup>1</sup> The first day's run of this yard on the paving at Lincoln Park was made with a cement penetrating 70 at 77° F. This was raised as soon as discovered.

*Sands for asphalt surface.*—There have been 25 samples of sand examined during the past year for the paving companies. Besides the above examinations, daily siftings of the sand in use are made at the works of the several companies, samples being taken each hour and combined to get an average of the day's work. The general character of the sand in use during the past year is given in the following table:

	Cranford.			Barber.	Thomas.
	Average of first three months.	Average of last six months.	Average of year.	Average of year.	Average of year.
Retained on—	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
20 mesh.....	4.5	5	5	4.5	0.5
40 mesh.....	44	34	39	40	39
60 mesh.....	33.5	30.5	33	32	41.5
80 mesh.....	8	10	9	9.5	6.5
100 mesh.....	4	9.5	6	6	4
Passed 100 mesh.....	6	11	8	8	8.5

*Petroleum residuum.*—The residuum oils used this year for oiling asphalt have been very uniform in quality and similar to what have been in use for the last three years. Of the 33 samples examined, 5 have been for the Cranford Company, 1 of which was rejected; 27 for the Barber Company, 1 being rejected; and 1 for the Thomas Company.

*Asphalt surface mixtures.*—Samples of surface mixture are taken each day at the yards, and those representing new or resurface work are analyzed for their per cent bitumen soluble in carbon disulphide. The results obtained are as follows:

	Cranford.	Barber.	Thomas.
Number of samples examined.....	106	22	11
Highest per cent of bitumen.....	12.2	12	10.4
Lowest per cent of bitumen.....	8.7	9.8	9.4
Average per cent of bitumen.....	10.9	10.8	9.9

*Natural asphalts.*—Of the seven samples of natural asphalt presented to this office for examination as to their utility for paving purposes, three are worthy of notice. They were from the Standard and the Alcatraz companies of California, and the Pittsburg Asphalt Company. The Standard Asphalt Company presented 3 samples; one of natural asphalt, one of refined asphaltic oil, and another which they called refined asphalt. Their natural asphalt is of a glance pitch character and would be useless for paving without the liquid. The asphaltic oil, or liquid asphalt, is by far the best that I have found on the market for fluxing asphalts, and its mixture with the natural asphalt, making their so-called refined, produces an article that I believe will prove superior for paving. The Alcatraz Asphalt Company presented 3 corresponding samples. Their refined asphalt or asphalt cement, which is made by the admixture of their asphaltic oil with their natural asphalt, is a product that would require great care and skill in manipulation to produce a uniform and durable pavement, and I believe the precaution necessary is next to impracticable.

The Pittsburg asphalt is intended as a softening agent or flux for other asphalts. It is an artificial product and does not resemble asphalt in any way, being waxy and nonadhesive in character and possessing the property of being but slightly susceptible to change in temperature. This inestimable property is imparted to the cement which has been produced by fluxing an asphalt with this softening agent. A few practical tests are being made with both asphalt blocks and sheet asphalt pavements, in which is used Trinidad asphalt fluxed with Pittsburg asphalt, and thus far the results are proving favorable.

#### SHEET ASPHALT PAVEMENTS.

Considerable change has been made during the past year in asphalt pavement by the addition of a fine sand to a sand similar to that formerly used. This combining of sands is not to be commended, owing to the nonuniformity of the resulting mixture; but under the present circumstances it is the best that can be done as there is no suitable fine sand available. The only fine sand now available is that dredged off the foot of Seventeenth street. Its character and mesh composition well adapts it to asphalt paving, but being a dredged sand it is, as a consequence very wet, and if used separately great difficulty would be experienced in heating it by method in use. This could be overcome to a great extent by keeping large quantities in stock, thus allowing the water to drain and dry out of it. But thus far the consumption has kept pace with the supply. This change in sand has been made not only on a theoretical study of sand void, but on a practical study of the older pavements; comparing those which have been down from ten to eighteen years with those of recent date. The following table is given to illustrate this:

	Location of pavement.			
	First street W., between Pennsylvania and Indiana avenues.	New Jersey avenue and K street W.	Thirteenth street W., between New York avenue and I street.	Rhode Island avenue, between Sixteenth and Seventeenth streets. <sup>1</sup>
Years in use.....	12	12	15	3
Bitumen soluble..... per cent..	10.8	10.4	11	10.1
Sand mesh composition:				
Retained on 20 mesh..... do....	5	1.2	1.5	5
Retained on 40 mesh..... do....	18.5	2.4	33.5	49.6
Retained on 60 mesh..... do....	39	29.5	37	27.5
Retained on 80 mesh..... do....	14.5	30.5	7	7.4
Retained on 100 mesh..... do....	17.5	25.5	4.5	3.8
Passed 100 mesh..... do....	10	10.9	12	6.7

<sup>1</sup> This is the type of all pavements laid for the past five years.

For sand being used at present see report in surface mixtures.

The use of this fine sand, which makes the asphalt surface much more impervious to moisture, will prevent to a large extent the rotting of Trinidad pavements from the absorption of water, provided they receive proper compression.

I have devised a simple apparatus, with which the relative porosity of pavements can be rapidly determined and the results prove conclusively that pavements made of fine sand are less porous than those made of coarse, all other conditions being the same.

The apparatus consists of a wide-mouthed bottle, fitted with a rubber stopper, with two holes through one of which is a bent tube, while through the other is an inverted glass stopcock burette. In the large end of this burette, which protrudes into the bottle, is inserted a funnel, stem upward, by means of a cork, thus allowing the funnel to hang inverted in the bottle. To determine the porosity of a pavement a solid piece of it, small enough to fit into the neck of the bottle, is placed in the bottle, which should be about three-quarters full of water. The bottle is then tightly stoppered, so that the funnel will hang directly over the sample of pavement. The stopcock is then opened, and by blowing into the bent tube the water is forced up into the burette to within about an inch of the top, then closing the stopcock the height of the water in the burette is read. On applying an exhaust to the bottle through the bent tube the air contained in the pores of the sample will be extracted and caught under the inverted funnel. On removing the exhaust, this air will be drawn from the funnel into the burette and its volume then measured by deducting the previous amount of air from that in the burette at present, this being the volume extract from the sample. The volume of the sample is then determined by some simple method and with this the per cent of air extracted from the pavement can be calculated.

Below are a few results of the per cent of air extracted and the mesh composition of sand contained in the several pavements:

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Air extracted.....	6	11	8.5	4	12	22	4.7
Bitumen .....	10	10	10.5	10.4	10.2	10.01	10.6
Sand-mesh composition:							
Retained on 20 mesh.....	2.4	4.5	4	1.2	5	5	.5
Retained on 40 mesh.....	17.7	41.2	37	2.4	47.5	36	2
Retained on 60 mesh.....	28.3	33.5	31	29.5	30	27.5	24
Retained on 80 mesh.....	21.2	7.8	12	30.5	5.5	10	30
Retained on 100 mesh.....	15.5	4.2	6	25.5	5	9.5	36
Passed 100 mesh.....	14.9	5.8	10	10.9	7	12	7.5

An exhaust of 20 inches of mercury was used in the above determination.

*Origin of samples.*—Samples No. 1, fine sand, and No. 2, coarse sand, were inch cubes of mixture, made under a pressure of 1,000 pounds, composed of Trinidad asphalt cement, 15 parts to 85 parts of sand. No. 3, pavement from First street W. near K street, had received full compression of roller, but no traffic. No. 4, pavement from New Jersey avenue and K street NW., down under medium traffic thirteen years. No. 5, pavement from Pennsylvania avenue near Fifth street NW., under medium traffic five years. No. 6, Pennsylvania avenue and Fifteenth street, a piece of pavement from a patch that rotted out in five weeks. It was put down with chilled surface mixture just before a cold rain which was followed by frost. Its great porosity was evidently due to improper compression which allowed absorption of water, thus causing its speedy disintegration. No. 7, pavement taken from Main street, Buffalo, N. Y., down under heavy traffic two years.

*Asphalt binder.*—Great improvement can be noted in the binder mixture as laid at the present time over that of last year. This improvement is due to the addition of smaller stone and dust, to a limited extent, to the old one-sized binder stone. This change is very marked and well illustrates the importance and necessity of a thorough study of the character and grade of stone or sand to be used with asphalt in the manufacture of pavements.

## HYDRAULIC CEMENTS.

The following tables give the average results from tests on the natural and Portland cements examined, and also the number rejected and cause of rejection:

## A.—Natural cements.

Brand.	Number of barrels.	Number of samples.	Per cent of residue, 100 mesh.	Per cent of water.		Initial set, neat.
				Neat.	2 parts sand.	
Antietam .....	1	1	19	32	15	<i>h. m.</i> 40 0
Cedar Cliff .....	452	41	17.8	32	15	33 6
Cumberland, McGill's .....	11,055	1,079	19.8	32	15	29 5
Cumberland, Black's .....	7,176	650	16.5	32	15	32 8
Cumberland, special .....	800	80	17.4	32	15	27 0
Cumberland and Potomac .....	2,900	200	18.7	32	15	33 8
Round Top .....	10,084	556	17	32	14.2	28 0
Rosendale .....		35	18	30	14	89 0
Rosendale, improved .....		3	15	30	14	65 0
Union .....	12,291	1,082	10.79	27	13.5	22 5
Shepherdstown .....		1	18	31	14	43 0
Total .....	44,759	3,728				

Brand.	Tensile strength.			Temperature—		Rejected.		Cause of rejection.	
	1 day, neat.	7 days, neat.	7 days, 2 parts sand.	Of air.	Of water.	Number of lots.	Number of barrels.	Set.	Strength.
Antietam .....	62	169	48	° F. 89	° F. 89	1	1		
Cedar Cliff .....	69.2	118.5	60.2	85	85	9	1,175	6	3
Cumberland, McGill's .....	134.32	201.85	133.78	88	88	9	950	9	
Cumberland, Black's .....	135.9	286.7	138.5	85	85	11	1,225	11	
Cumberland, special .....	144	287.87	156	82	83	1	100		1
Cumberland and Potomac .....	110.8	285.9	139.9	87	87	2	200		2
Round Top .....	94.5	205.51	113.4	82	82	5	1,500	2	3
Rosendale .....	72	119	32.5	78	78	35			35
Rosendale, improved .....	76	103	43.3	76	76	3			3
Union .....	107.87	167	110.53	85	86	0	0		
Shepherdstown .....	61	145	108	74	74	0	0		

## B.—Portland cements.

Brand.	Number of barrels.	Number of samples.	Per cent of residue, 100 mesh.	Per cent of water.		Initial set, neat.
				Neat.	3 parts sand.	
Ahlborg .....	1	1	0	20	10	<i>h. m.</i> 4 0
Alpha .....		2	7	20	10	2 30
Alsen .....		2	7	20	10	2 10
Atlas .....	2,900	290	9.8	20	10	3 4
Belgium .....	1	10	10	20	10	3 15
Brooks, Shoebridge & Co .....		1	0	20	10	4 50
Dufosse & Henry .....	6,597	543	10.9	20	10	3 28
Dykerhoff .....	5,850	450	11.12	20	10	3 13
Germania .....	107	67	6.5	20	10	2 45
Hanover .....	350	30	5	20	10	2 0
Henry .....	1	1	14	20	10	3 30
Heyn .....	1	1	17	20	10	1 0
La Cloche .....	1	1	10	20	10	1 40
Mannheimer .....	2	2	2	20	10	3 30
Phoenix .....	1	1	20	20	10	2 0
Sanduska .....	1	1	9	20	10	4 0
Shefferdecker .....	1	4	5	20	10	4 30
Star .....	1	1	7	20	10	1 30
Porta .....	200	25	11.5	20	10	2 45
Total .....	16,012	1,433				

Brand.	Tensile strength.			Temperature—		Rejected.		For what rejected.
	1 day, neat.	7 days, neat.	7 days, 3 parts sand.	Of air.	Of water.	Number of lots.	Number of barrels.	
Albog .....	285	616	200	°F. 72	°F. 72	0	0	
Alpha .....	287	750	233	75	75	0	0	
Alsen .....	398	584	197	71	71	0	0	
Atlas .....	432.3	768.8	321.5	78	77	0	0	
Belgium .....	258	560	186	72	72	0	0	
Brooks, Shoebridge & Co. ....	215	476	163	70	70	0	0	
Dufosse & Henry .....	138	543.2	207	80	80	0	0	
Dykerhoff .....	374	598.8	225	81	81	0	0	
Germania .....	357.2	644.5	204.2	78	78	0	0	
Hanover .....	336	545	193	78	78	0	0	
Henry .....	400	748	216	71	71	0	0	
Heyn .....	210	419	187			1	1	Fineness.
La Cloche .....	110	416	90	76	76	1	1	7-day sand.
Mannheimer .....	187	515	187	74	73	0	0	
Phoenix .....	254	418	176	74	74	1	1	Fineness.
Sanduska .....	110	810	266	72	72	1	1	Shrinking.
Shefferdecker .....	262	530	157	70	70			
Star .....	200	546	146	72	72			
Porta .....	297	461	259	84	84	0	0	

*Long-time tests.*—Long-time tests have been started on the following brands of natural and Portland cement, and are to be continued for a period of five years. Other well-known brands will be added to the list as soon as time will permit the making up of the necessary briquettes. These tests are being carried on to ascertain the relative increase in tensile strength of sand mortars made with the various brands, and also to determine if the statement made by many that a cement attaining a high tensile strength in a short time will in a longer period of time show a falling off or be surpassed in a long time by a cement that has acquired tensile strength much slower.

## C.—Long-time tests.

Brand of natural.	Per cent of water.		Tempera- ture of—		Tensile strength.					
					Neat.		2 parts quartz.			
	Neat.	2 parts sand.	Air.	Water.	1 day.	7 days.	7 days.	14 days.	21 days.	1 month.
Antietam .....	32	15	89	88	62	168	48	103	110	124
Cedar Cliff .....	33	15	90	90	88	185	85	145	152	195
Cumberland .....	32	15	90	91	169	218	156	208	290	297
Cumberland and Potomac .....	32	15	91	91	146	204	188	196	220	225
Round Top .....	32	14	90	90	81	203	122	188	233	255
Shepherdstown .....	31	14	91	92	61	145	106	144	161	210
Union, mixed with 3 parts quartz .....	22	10	76	75	94	130	74	93	160	181
Improved Union .....	21	10	70	68	102	116	95			132

Brand of natural.	Tensile strength									
	2 parts quartz.									
	2 months.	3 months.	4 months.	5 months.	6 months.	7 months.	8 months.	9 months.	10 months.	11 months.
Antietam .....	158	162	161	173	185	180	188	203	228	230
Cedar Cliff .....	252	255	256	270	290	309	260	298	304	346
Cumberland .....	307	356	366	357	350	355	416	406	429	434
Cumberland and Potomac .....	315	403	388	384	397	394	406	388	423	424
Round Top .....	305	342	371	378	387	383	413	428	444	451
Shepherdstown .....	227	265	283	272	281	305	321	300	301	315
Union, mixed with 3 parts quartz .....	194	236	240	244	258					
Improved Union .....	178	162	198	226	232					

Brand of Portland.	Per cent of water.		Tempera- ture of—		Tensile strength.							
					Neat.		3 parts quartz.					
	Neat.	2 parts sand.	Air.	Water.	1 day.	7 days.	7 days.	1 month.	2 months.	3 months.	4 months.	5 months.
Alsen .....	20	10	70	65	292	135	188	310	294	328	385	380
Atlas .....	20	10	90	90	432	768	321	441				
Dufosse & Henry .....	20	10	70	70	149	546	159	188	229	277	300	320
Dykerhoff .....	21	10	70	70	345	506	164	175	192	236	257	293
Egypt .....	20	10	68	65	188	278	159	205	255	240	285	301
Giant .....	21	11	72	72	160	495	230	275	275	267	296	329
Hanover .....	20	10	68	65	295	571	205	244	251	277	301	315
Porta .....	20	10	70	68	407	415	181	257	305	319	315	322

**Cement for cement sidewalks.**—Special care has been given to the sampling of cement for sidewalks, and a system of labeling has been introduced so that every barrel that has been inspected is labeled, giving the lot number and date when inspected. No barrels are allowed to be used on the street unless so labeled.

## THE STUDY OF SAND FOR MORTARS AND CONCRETE.

As much time as was possible, without interfering with the current work, has been given to the study of sands in its relation to mortars, etc. It is strange what little work appears to have been done on this subject, and when one considers that sand and broken stone are the larger ingredients of mortars and concrete it is evident that much more attention should be devoted to this subject.

The following table shows the great variation in tensile strength of mortars made with a Cumberland cement and various sands:

*D.—Tensile strength of sands of different mesh composition.*

[Mixed 2 parts sand with 1 part Cumberland cement].

Sieve.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.	No. 10.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Retained on—										
10 mesh.....	0	0	27.6	0	0	40	0	0	0	0
20 mesh.....	3.6	0.5	35.8	2	0.8	18.4	0	0	0	0
40 mesh.....	34.4	1.6	30.9	27	45.6	26	74	44	12.6	0.5
60 mesh.....	31.6	18.3	4.1	46.5	39	8	20	50.1	68.1	31.7
80 mesh.....	12.7	30.3	1	12.8	9.8	3	2.2	3.8	10.6	28.2
100 mesh.....	9.6	40.7	0.3	7.7	1.7	2.2	1.2	1	4.8	27
Passed 100 mesh.....	7.8	8.4	0.2	3.9	1.4	2	2	1.2	2	11.8
Percent water used.....	16	16.8	13	15	15	12.5	12	12	14	14.5
Tensile strength:										
7 days.....	31	20	83	40	24	71	51	53	39	42
28 days.....	67	56	156	94	59	128	103	102	98	83

Tensile strength of standard quartz: 7 days, 81; 28 days, 265.

ORIGIN OR NAME OF SAND.

No. 1. Lord's, Seventeenth street dredged sand (bleached).	No. 5. Lord's, gray down-river sand.
No. 2. Lord's, front sand.	No. 6. Lord's, gravel sand.
No. 3. Lord's, first concrete.	No. 7. Worthington's, first-pit sand.
No. 4. Lord's, yellow down-river sand (bleached).	No. 8. Worthington's, second-pit sand.
	No. 9. Worthington's, third-pit sand.
	No. 10. Worthington's, fourth-pit sand.

It is evident from the above table that if the true value of a mortar is to be determined it is necessary to test not only the cement, but the sand to be used with it. An investigation as to the influence of the mesh composition of sand on the strength of mortar is being carried on, but the results are as yet too meager to draw conclusions therefrom.

WATER.

The public wells analyzed in the past year may be localized as follows:

Locality.	Good.	Suspicious.	Condemned.	Total.
Northwest.....	34	16	14	64
Northeast.....	18	5	8	31
Southwest.....	8	6	16	30
Southeast.....	36	14	19	69
Total.....	96	41	57	194

The aqueduct water has been analyzed at intervals for the information of the water department.

*The investigation of the action of Potomac water on lead pipe.*—As requested, I have been investigating for the past year the action of the Potomac water on lead pipes to determine if enough lead is dissolved by the water to be injurious to the public health. Great diversity of opinion exists as to the quantity of lead necessary to be contained in a water to make it unsafe for drinking. I have found, however, good authorities to state that less than 0.05 grains of lead per imperial gallon (equivalent to 0.0416 grains per United States gallon) produces no deleterious effect on the health of those using the water, but such a point should be left to the medical profession to determine.

This action of water on lead pipes can only be determined by actual aqueduct service continued through a series of seasons, as it is well known that the action of water on lead has been intermittent. Hence water apparently free from lead to-day may become charged with that metal to-morrow. In order to have all conditions corresponding as near as possible with those of actual service in carrying on this investigation, I had one new 40-foot lead service pipe in Anacostia and 50 feet of new lead pipe attached to the high service main at the U street pump house. My object in having pipes at these two places was to include all conditions that might exist in

the water service of the District. The water in the pipe at Anacostia was at a low pressure and had traveled the maximum distance in the service mains. That contained in the pipe at the U street pump house was under high pressure and had traveled the minimum distance in mains. Both pipes were sealed after the drawing of every sample so that no water could be drawn from either without my knowledge of the fact.

*Results from pipe at U street pump house.*

Date.	Water analyzed.	Grains in U. S. gall.
1894.		
June 8	Water after 24 hours in new pipe, sample drawn off quietly, contained..... Remainder of water run off quietly.	0.07
June 15	Water after 1 week in pipe, sample drawn off quietly, contained..... Remainder of water run off quietly.	.10
June 29	Water after 2 weeks in pipe, sample drawn off quietly, contained..... Remainder of water run off quietly.	.06
July 13	Water after 2 weeks in pipe, sample drawn off quietly, contained..... Remainder of water in pipe run off quietly.	.023
July 20	Water after 1 week in pipe, sample drawn off quietly, contained..... Remainder of water in pipe run off rapidly, thus detaching some of the coating from the interior of pipe.	.018
July 23	Water after 3 days in pipe, sample run off quietly, contained..... Remainder of water run off quietly.	.025
Aug. 17	Water after 25 days in pipe, the sample drawn off quietly, contained..... Remainder of water in pipe run off quietly.	.016
Aug. 24	Water after 1 week in pipe, sample drawn off quietly, contained..... Remainder of water in pipe run off quietly.	.024
Aug. 31	Water after 1 week in pipe, sample drawn off quietly, contained..... Remainder of water in pipe run off quietly.	.017
Sept. 14	Water after 2 weeks in pipe, sample drawn off quietly, contained..... Remainder of water in pipe run off quietly.	.02
Oct. 13	Water after 1 month in pipe, sample drawn off quietly, contained..... Remainder of water in pipe run off quietly.	.01
Nov. 26	Water after 1½ months in pipe, sample drawn off quietly, contained..... Remainder of water in pipe run off quietly.	.006
1895.		
Jan. 26	Water after 2 months in pipe, sample drawn off quietly, contained..... Remainder of water in pipe run off quietly.	.005
Mar. 26	Water after 2 months in pipe, sample drawn off quietly, contained..... Remainder of water in pipe run off quietly.	.006
Apr. 26	Water after 1 month in pipe, sample drawn off rapidly, which detached coating from interior of pipe, appeared quite muddy, contained.....	.12
June 1	Water after 1 month and 6 days in pipe, sample drawn off quietly, contained..... Remainder of water in pipe run off rapidly, detaching interior coating.	.018
July 1	Water after 1 month in pipe, first sample drawn off quietly, contained..... Second sample drawn off rapidly, detaching coating from interior of pipe, sample appeared muddy, contained.....	.032 .06

But three tests had been made on water from the pipe situated at Anacostia when the investigation there had to be discontinued on account of the house changing hands. As the results were all lower than corresponding ones at the U street pump house, I did not consider it of sufficient importance to continue tests on a similar pipe.

It can readily be seen from the results obtained so far that the only great source of danger is where the coating becomes detached by a rapid flow of water after the pipe had remained unused for some time. However, I consider it of sufficient importance to continue this investigation and will report in full at a later date.

The force employed by this office and compensation received are as follows: One assistant inspector of asphalt and cements, \$3 per diem; one inspector, at works, \$4 or \$2 per diem, according to character of work.

Very respectfully,

A. W. Dow,  
*Inspector of Asphalt and Cement.*

The ENGINEER COMMISSIONER.



## REPORT OF THE SURVEYOR.

WASHINGTON, D. C., August 10, 1895.

GENTLEMEN: I have the honor to submit the following report of the operations of this office for the year ended June 30, 1895: During that period 949 lots were surveyed, 103 subdivisions were recorded, and 49 copies of plats were furnished to private parties; of this number 587 surveys and 19 plats were made and 76 subdivisions and 2 plats of Cathedral avenue were recorded prior to March 19, 1895, the date on which I qualified as surveyor of the District of Columbia, in accordance with act of Congress approved February 28, 1895. The remaining 362 surveys, 30 plats, and 27 subdivisions were made and recorded between that date and June 30, 1895.

The following services were performed, by order of Commissioners, prior to March 19, 1895:

*Surveys.*—Square 175, lot 3, pump house; square 1023, lots 37, 38, and 39, engine house.

*Plats.*—Square 830, opening and closing alleys; square 897, opening and closing alleys; extension of W street from Burleith to Thirty-fifth street NW; right of way through Branch avenue, East Washington Park; widening road at Rives Station; inclosure and Haddocks Hills; extension of Massachusetts avenue through the Naval Observatory grounds; addition to Zoological Park, dedicated by H. P. Waggaman; Rock Creek Park.

By order of the Commissioners, the following services were performed between March 19 and June 30, 1895:

*Surveys.*—Location of curb on Valley street, complaint of John A. Joyce; square 684, marking lines and locating obstructions in proposed alley; square 337, marking lines and locating obstructions in alley; Mount Pleasant (S. P. Brown's subdivision), block 3, lot 5, schoolhouse; reservation No. 7, lines of market and open space, north side thereof; District of Columbia line through Fowler tract, request of D. J. Howell; squares 90 and 109, surveying lines and locating obstructions on Florida avenue between Nineteenth street and Connecticut avenue; square 11, Bloomingdale, lines of 3-foot alley; square 175, lot 3, pump house; locating obstructions on Water street between M and O streets SW.; square south of 17, locating obstruction on Virginia and New Hampshire avenues; square 1187, lot 40, locating lines of bay window; square 555, lots 67 and 68, engine house; Mount Pleasant (S. P. Brown's subdivision), block 3, lot 5, schoolhouse; establishing lines of different squares fronting on Water street between the Long Bridge and United States arsenal; lines of alleys running north and south through blocks 2, 3, 6, 7, 10, and 11, Trinidad; line of O street extending 100 feet west from Twelfth street, Trinidad.

*Subdivisions, etc.*—Squares 833, 536, 684, and 464; widening Sherman avenue through Garfield Hospital grounds; 5 plats, opening of Albemarle street and extension of Thirty-eighth street; widening of Naylor road from Good Hope road to River road.

I respectfully recommend that an appropriation of \$2,000 be asked of Congress for the purchase of suitable material to be used in marking the different points of surveys throughout the city. Many of the stones which marked the original boundaries of squares have been removed, some prior and many during and subsequent to the late war. In the eastern section of the city the greatest damage in this respect has been done. The large area of open field in that section held out special inducements to the Government to occupy the same for the camping of troops and the erection of temporary buildings. While the work of building was going on large and heavily laden Government wagons engaged in hauling material and commissary stores ran against the stones located at the corners of many of the squares and broke and displaced them. In the thickly settled parts of the city large iron pins can be used to advantage, but in large areas of country, and especially in that portion of the city lying east of the Capitol, large square stones should be used. I feel deeply interested in this matter, and feel assured it will receive your serious consideration. The work can be done better and more quickly now, while the ground is unoccupied by houses, and the range of the streets can be more accurately determined than at a later date, when buildings are erected and the march of improvements blocks the way. I can not too earnestly request your cooperation in this matter, which is of such vital importance to Government and private interests.

Since the recent order of the Commissioners directing notification of this office previous to disturbance of sidewalks and roadway by improvements of any description, I have been able to prevent the loss of many valuable marks, both ends of about 200 square fronts and one end of each of some 400 other square fronts having been referenced so that the marks may be restored on completion of the improvements.

The gentlemen assigned to assist me are capable and efficient, and I can not speak too highly of them.

In conclusion, permit me to express my appreciation of the honor conferred upon me.

Very respectfully,

WM. FORSYTH,  
Surveyor, District of Columbia.

THE COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## REPORT OF THE BOARD OF EXAMINERS OF STEAM ENGINEERS.

WASHINGTON, D. C., *July 30, 1895.*

SIRS: We take pleasure in submitting to you the report of the board of examiners of steam engineers for the year ending June 30, 1895.

The following table will show the work as it progressed during each month:

Year and month.	Meetings held.	Applications received.	Applications approved.	Applicants not competent.	First class.	Second class.	Third class.
<b>1894.</b>							
July.....	4	5	4	1	0	1	3
August.....	5	13	10	3	1	4	5
September.....	6	8	8	0	0	4	4
October.....	9	17	16	1	3	5	8
November.....	9	23	17	6	1	4	12
December.....	7	17	15	2	3	2	10
<b>1895.</b>							
January.....	9	17	15	2	4	2	9
February.....	7	8	6	2	0	2	4
March.....	9	9	5	4	0	3	2
April.....	9	14	10	4	2	2	6
May.....	8	12	9	3	0	6	3
June.....	8	12	11	1	2	0	9
Total.....	90	155	126	29	16	35	75

In concluding this report we deem it proper to state that the law regulating steam engineering and the rigid examination of applicants for steam engineer's license has been a great benefit to the community. As we now have a better class of engineers running steam plants, which is proven by the fact that during the year no accidents have occurred with any of the steam boilers in the District, and as a further evidence of the estimation put on the examining board by Government officials, citizens, or superintendents owning steam plants applicants for steam engineer's license frequently inform us that they will not be employed, and in some cases will lose their situation, if they do not obtain engineer's license.

The board of examiners are doing all in their power to make the office more efficient. Our estimate of the expenses for the year ending June 30, 1897, is \$900, and we most respectfully ask that the above amount be appropriated.

Respectfully submitted.

JOHN H. WILKERSON, *Chairman,*

H. BOESCH, *Secretary,*

DANIEL JOHNSON,

*Examining Board.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## REPORT OF THE INSPECTOR OF STEAM BOILERS.

WASHINGTON, D. C., *July 29, 1895.*

GENTLEMEN: I have the honor to make the following report for the fiscal year ended June 30, 1895:

## OPERATIONS AND RECEIPTS.

Fee boilers inspected during the year.....	605
Boilers inspected for the District of Columbia.....	6
Total.....	611
New boilers erected.....	37
Boilers condemned for repairs.....	20
Boilers condemned for new ones.....	5
Explosions.....	None.
Fee received for inspecting 595 boilers, at legal fee of \$5 each.....	\$2,975.00
Fee still due from 10 boilers.	



## EXPENSE FOR THE YEAR.

Assistant, B. R. Wilkerson.....	\$632.00
Laborer, A. Addison.....	400.50
Care of horse, \$240; shoeing horse, \$21.50.....	261.50
Printing and stationery, \$12.25; material and tools for wagon, \$12.75.....	25.00
Repairing and painting wagon.....	27.50
Repairing harness, 50 cents; one bridle and reins, \$3.50.....	4.00
<b>Total</b> .....	<b>1,350.50</b>
<b>Received</b> .....	<b>2,975.00</b>
<b>Expended</b> .....	<b>1,350.50</b>
<b>Balance</b> .....	<b>1,624.50</b>

Estimate for expenses of the office for the year ending June 30, 1896, \$1,400.

I would most respectfully state that the year was one of great success. There was no loss of life or property. Although it was a year of business depression, there has been an increase in the number of steam boilers in the District of Columbia.

Respectfully submitted.

JOHN H. WILKERSON,  
*Inspector of Steam Boilers.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## INSPECTED IN 1894.

*July 2.*—No. 1. Horizontal tubular boiler in building southwest corner Ninth and F streets NW., owned by the Washington Loan and Trust Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires July 2, 1895.

*July 2.*—No. 2. Horizontal tubular boiler in Builders' Exchange, No. 719 to 721 Thirteenth street NW., owned by the Builders' Exchange Improvement Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires July 2, 1895.

*July 2.*—No. 3. Locomotive-form boiler in Government Printing Office. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires July 2, 1895.

*July 3.*—No. 4. Vertical tubular boiler in wood and coal yard, Fourteenth street, between B and C streets NW., owned by J. Edward Chapman. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires July 3, 1895.

*July 3.*—No. 5. New vertical tubular boiler (on sewer) used for hoisting purposes; owned by H. L. Cranford. Hydrostatic pressure, 165 pounds; working pressure allowed, 110 pounds to square inch. Expires July 3, 1895.

*July 5.*—No. 6. Horizontal tubular boiler in Swiss Steam Laundry, No. 2115 E street NW., owned by the Swiss Steam Laundry Company. Hydrostatic pressure, 135 pounds; working pressure allowed, 90 pounds to square inch. Expires July 5, 1895.

*July 7.*—No. 7. Babcock & Wilcox Company boiler in car house, Eighth and L streets SE., owned by the Washington and Georgetown Railroad Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires July 7, 1895.

*July 9.*—No. 8. Horizontal tubular boiler in Swiss Steam Laundry, No. 2115 E street NW., owned by the Swiss Steam Laundry Company. Hydrostatic pressure, 135 pounds; working pressure allowed, 90 pounds to square inch. Expires July 9, 1895.

*July 9.*—No. 9. Horizontal tubular boiler in Agricultural Department. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 9, 1895.

*July 9.*—No. 10. Horizontal tubular boiler in Agricultural Department. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 9, 1895.

*July 9.*—No. 11. Horizontal tubular boiler in annex, Agricultural Department. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 9, 1895.

*July 9.*—No. 12. Horizontal tubular boiler in Fendall Building, No. 344 D street NW., E. A. Newman, manager. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires July 9, 1895.

*July 9.*—No. 13. Vertical tubular boiler in machine shop at Deanwood, D. C., owned by the American Energizer Manufacturing Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires July 9, 1895.

*July 10.*—No. 14. Horizontal tubular boiler in Builders' Exchange, No. 719 to 721 Thirteenth street NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires July 10, 1895.

*July 10.*—No. 15. Horizontal tubular boiler in building, southwest corner Ninth and F streets NW., owned by the Washington Loan and Trust Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires July 10, 1895.

*July 10.*—No. 16. Horizontal tubular boiler in No. 624 to 626 Virginia avenue SW., owned by N. Auth. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires July 10, 1895.

*July 12.*—No. 17. Horizontal tubular boiler in laundry at Deaf and Dumb Asylum. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires July 12, 1895.

*July 13.*—No. 18. Vertical tubular boiler in Pacific Building, No. 622-624 F street NW., owned by the Pacific Building Company. Hydrostatic pressure, 120 pounds; working pressure, allowed 70 pounds to square inch. Expires July 13, 1895.

*July 13.*—No. 19. Horizontal tubular boiler in iron works, No. 460 to 474 Maine avenue SW., owned by George White & Sons. Hydrostatic pressure, 140 pounds; working pressure allowed; 80 pounds to square inch. Expires July 13, 1895.

*July 14.*—No. 20. Horizontal tubular boiler in steam bakery, No. 413 I street NW., owned by Charles Schneider. Hydrostatic pressure, 80 pounds; working pressure allowed, 50 pounds to square inch. Expires July 14, 1895.

*July 14.*—No. 21. Vertical tubular boiler in brickyard at Ivy City, D. C., owned by the Childs Brick Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 95 pounds to square inch. Expires July 14, 1895.

*July 16.*—No. 22. Horizontal tubular boiler in mill, Virginia avenue and Four-and-a-half street SW., owned by the Washington Flour and Feed Company. Hydrostatic pressure, 125 pounds; working pressure allowed, 85 pounds to square inch. Condemned for repairs; repaired and passed. Expires July 16, 1895.

*July 17.*—No. 23. Locomotive-form boiler at wharf and mill, foot of Sixth street SW., owned by estate of G. L. Sheriff. Hydrostatic pressure, 85 pounds; working pressure allowed, 50 pounds to square inch. Expires July 17, 1895.

*July 17.*—No. 24. Vertical tubular boiler in No. 1005 Seventh street SW., owned by Leonard J. Nilson. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires July 17, 1895.

*July 17.*—No. 25. Vertical tubular boiler in Union Stock Yards, Bennings, D. C., used for pumping purposes. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires July 17, 1895.

*July 18.*—Nos. 26 and 27. Horizontal tubular boilers in works South Capitol and R streets SE., owned by the Washington Asphalt Block and Tile Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds each to square inch. Expire July 18, 1895.

*July 18.*—No. 28. Horizontal tubular boiler in Pacific Building. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires July 18, 1895.

*July 18.*—No. 29. Vertical tubular boiler in galvanized iron and copper works, 632 K street SW., owned by A. S. Reavis. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires July 18, 1895.

*July 19.*—No. 30. Locomotive-form boiler in works, Seventh and L streets SW., owned by Chace & Bro. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 19, 1895.

*July 20.*—No. 31. Vertical tubular boiler foot of Seventeenth street NW., owned by J. B. Lord. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds, if necessary 90 pounds, to square inch. Expires July 20, 1895.

*July 20.*—Nos. 32 (1), 33 (2), and 34 (4). Babcock & Wilcox Company boilers in Power House, Fourteenth and E streets NW., owned by the Washington and Georgetown Railroad Company. Hydrostatic pressure, 200 pounds; working pressure allowed, 125 pounds each to square inch. Expire July 20, 1895.

*July 21.*—No. 35. Vertical tubular boiler in printing office, No. 623 D street NW., owned by J. F. Sheiry. Hydrostatic pressure, 155 pounds; working pressure allowed, 60 pounds, if necessary 70 pounds, to square inch. Expires July 21, 1895.

*July 23.*—Nos. 36 (3), 37 (5), and 38 (6). Babcock & Wilcox Company boilers in power house, Fourteenth and E streets NW. Hydrostatic pressure, 200 pounds; working pressure allowed, 125 pounds each to square inch. Expire July 23, 1895.

*July 23.*—No. 39. New Horizontal tubular boiler in Hotel Emrich, Nos. 485 to 499 Pennsylvania avenue NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds, if necessary 90 pounds, to square inch. Expires July 23, 1895.

*July 23.*—No. 40. Vertical tubular boiler in Bureau of Animal Industry of the United States Agricultural Department, No. 1362 B street SW. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 23, 1895.



*July 23.*—No. 41. Vertical tubular boiler in Chemical Laboratory of the United States Agricultural Department, Fourteenth and B streets SW. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Condemned for a new boiler; allowed to run three months. Expires October 23, 1894.

*July 24.*—No. 42. Vertical tubular boiler in slaughterhouse, Ninth and C streets NE., owned by John Howard. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 24, 1895.

*July 24.*—No. 43. Vertical tubular boiler in machine shop, Maine avenue, between Third and Four-and-a-half streets SW., owned by E. N. Gray & Co. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 24, 1895.

*July 25.*—No. 44. Vertical tubular boiler in dye works, No. 1535 Fourteenth street NW., owned by R. C. Douglas. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires July 25, 1895.

*July 25.*—No. 45. Babcock & Wilcox Company boiler in car house, Mount Pleasant, D. C., owned by the Washington and Georgetown Railroad Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires July 25, 1895.

*July 25.*—Nos. 46 (7) and 47 (8). Babcock & Wilcox Company boilers in power house, Fourteenth and E streets NW. Hydrostatic pressure, 200 pounds; working pressure allowed, 125 pounds each to square inch. Expire July 25, 1895.

*July 25.*—No. 48. Vertical tubular boiler in plant, Nos. 624 and 626 Virginia avenue SW., owned by N. Auth. Hydrostatic pressure, 225 pounds; working pressure allowed, 150 pounds to square inch. Expires July 25, 1895.

*July 26.*—No. 49. Horizontal tubular boiler in printing office, No. 1346 Florida avenue NW., owned by the Brodix Publishing Company. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 26, 1895.

*July 26.*—No. 50. Horizontal tubular boiler in brewery, Nos. 1221 to 1233 Twentieth street NW., owned by the Christian Heinrich Brewing Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires July 26, 1895.

*July 27.*—No. 51. Vertical tubular boiler used for hoisting purposes owned by W. C. Morrison. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires July 27, 1895.

*July 27.*—No. 52. Vertical tubular boiler in No. 1634 Fourteenth street NW., owned by D. J. Weyman. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires July 27, 1895.

*July 28.*—No. 53. New vertical tubular boiler used for hoisting purposes, owned by Henry Conradis & Son. Hydrostatic pressure, 155 pounds; working pressure allowed, 100 pounds to square inch. Expires July 28, 1895.

*July 30.*—No. 54. Horizontal tubular boiler in exhaust house, Twenty-seventh and H streets NW., owned by the Washington Gas Light Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires July 30, 1895.

*July 30.*—No. 55. Vertical boiler in gas works, Twelfth and M streets SE., owned by the Washington Gas Light Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires July 30, 1895.

*July 31.*—No. 56. Horizontal tubular boiler in printing office, No. 1346 Florida avenue NW., owned by the Brodix Publishing Company. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires July 31, 1895.

*July 31.*—No. 57. Economic boiler in Franklin Steam Laundry, No. 504 Thirteenth street NW., owned by F. V. Killian. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires July 31, 1895.

*July 31.*—No. 58. Vertical tubular boiler in Washington City Orphan Asylum, Fourteenth and S streets NW. Hydrostatic pressure, 157 pounds; working pressure allowed, 80 pounds, if necessary 90 pounds, to square inch. Expires July 31, 1895.

*August 2.*—No. 59. New vertical tubular boiler in steam bakery in rear of No. 116 Virginia avenue SW., owned by John H. Trusheim. Hydrostatic pressure, 150 pounds; working pressure allowed, 70 pounds, if necessary 80 pounds, to square inch. Expires August 2, 1895.

*August 2.*—No. 60. Vertical tubular boiler in steam bakery, Wiltberger street NW., owned by J. M. Ruth. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 2, 1895.

*August 3.*—No. 61. Baxter boiler in ice-cream depot, No. 1427 New York avenue NW., owned by the Jacob Fussell Company. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires August 3, 1895.

*August 3.*—No. 62. Locomotive-form boiler in wood and coal yard, 2618 Pennsylvania avenue NW., owned by H. Tumety. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires August 3, 1895.

*August 4.*—No. 63. Vertical tubular boiler in wood and coal yard, Third and P streets NW., owned by Mrs. J. E. Divver. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires August 4, 1895.

*August 4.*—No. 64. Vertical tubular boiler in steam bakery, Seventh street NW., owned by Corby Bros. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 4, 1895.

*August 6.*—No. 65. New horizontal tubular boiler in slaughterhouse, Seventh street NW., owned by A. Löffler. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires August 6, 1895.

*August 6.*—No. 66. Vertical boiler in gas works, Twelfth and M streets SE., owned by the Washington Gas Light Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires August 6, 1895.

*August 7.*—Nos. 67 and 68. Horizontal tubular boilers in ammonia works, Twenty-seventh street, between G and H streets NW., owned by the B. P. Clapp Ammonia Company. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds each to square inch. Expires August 7, 1895.

*August 7.*—No. 69. Horizontal tubular boiler in Riggs House, Fifteenth and G streets NW., G. De Witt, manager. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 7, 1895.

*August 8.*—No. 70. Horizontal tubular boiler in McGill Building, No. 906 G street NW., owned by James H. McGill. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 8, 1895.

*August 9.*—No. 71. Vertical tubular boiler in grocery store, No. 946 to 950 Louisiana avenue NW., owned by W. H. Walker. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires August 9, 1895.

*August 10.*—No. 72. Vertical tubular boiler in slaughterhouse, Cottage Hill NE., District of Columbia, owned by J. H. Ruppert. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 10, 1895.

*August 11.*—No. 73. Vertical tubular boiler in bottling works, Twenty-seventh and K streets NW., owned by the Arlington Bottling Company. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires August 11, 1895.

*August 11.*—No. 74. Vertical tubular boiler in warehouse, K street and James Creek Canal SW., owned by Nicolai Bros. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires August 11, 1895.

*August 11.*—No. 75. Horizontal tubular boiler in Columbia Hospital, Twenty-fifth and L streets NW. Hydrostatic pressure, 115 pounds; working pressure allowed, 70 pounds to square inch. Expires August 11, 1895.

*August 13.*—No. 76. Horizontal tubular boiler in planing mill, foot of Ninth street SW., owned by Wimsatt & Uhler. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 13, 1895.

*August 13.*—No. 77. Horizontal tubular boiler in power house, Ontario avenue and Superior street NW., owned by the Rock Creek Railway Company. Hydrostatic pressure, 155 pounds; working pressure allowed, 100 pounds to square inch. Expires August 13, 1895.

*August 13.*—Nos. 78 and 79. Horizontal tubular boilers in slaughterhouse, Benning, D. C., owned by the Washington Abattoir Company. Hydrostatic pressure, 140 pounds; working pressure, 80 pounds each to square inch. Expires August 13, 1895.

*August 14.*—No. 80. Horizontal tubular boiler in Riggs House, Fifteenth and G streets NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires August 14, 1895.

*August 14.*—Nos. 81 and 82. Horizontal tubular boilers in Central Building, northwest corner Pennsylvania avenue and Ninth street NW., owned by the Gunton estate. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds each to square inch. Expires August 14, 1895.

*August 15.*—No. 83. Horizontal tubular boiler in Providence Hospital, Second and D streets SE. Hydrostatic pressure, 120 pounds; working pressure, 60 pounds to square inch. Expires August 15, 1895.

*August 15.*—No. 84 (67). Locomotive boiler in roundhouse, South Capitol and I streets SE., owned by the Philadelphia, Wilmington and Baltimore Railroad Company. Hydrostatic pressure, 165 pounds; working pressure allowed, 110 pounds to square inch. Expires August 15, 1895.

*August 15.*—No. 85. Horizontal tubular boiler in McGill Building, No. 906 G street NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 15, 1895.

*August 16.*—No. 86 (81). Locomotive boiler in roundhouse, South Capitol and I streets SE. Hydrostatic pressure, 175 pounds; working pressure allowed, 120 pounds to square inch. Expires August 16, 1895.

*August 17.*—No. 87. Vertical tubular boiler in works, Nos. 458 to 460 Pennsylvania avenue NW., owned by the Norris Peters Company. Hydrostatic pressure, 110

pounds; working pressure allowed, 70 pounds to square inch. Condemned for repairs; repaired and passed. Expires August 17, 1895.

*August 17.*—No. 88 (70). Locomotive boiler in station, corner Sixth and B streets NW., owned by the Philadelphia, Wilmington and Baltimore Railroad Company. Hydrostatic pressure, 125 pounds; working pressure allowed, 65 pounds, if necessary 80 pounds, to square inch. Expires August 17, 1895.

*August 18.*—No. 89 (27). Locomotive boiler in station, corner Sixth and B streets NW. Hydrostatic pressure, 125 pounds; working pressure allowed, 65 pounds, if necessary 80 pounds, to square inch. Expires August 18, 1895.

*August 20.*—No. 90. Horizontal tubular boiler in restaurant, No. 1016 Pennsylvania avenue NW., owned by George W. Harvey. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 20, 1895.

*August 20.*—Nos. 91 and 92. Horizontal tubular boilers in dry goods house, Nos. 420 to 426 Seventh street NW., owned by Lansburgh & Bro. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds each to square inch. Expire August 20, 1895.

*August 21.*—Nos. 93 and 94. Horizontal tubular boilers in Saks Building, Nos. 300 to 308 Seventh street NW., owned by Saks & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds each to square inch. Expire August 20, 1895.

*August 21.*—No. 95. Horizontal tubular boiler in Star Building, No. 1101 Pennsylvania avenue NW., owned by the Evening Star Newspaper Company. Hydrostatic pressure, 145 pounds; working pressure allowed, 90 pounds to square inch. Expires August 21, 1895.

*August 22.*—No. 96. Horizontal tubular boiler in Providence Hospital. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires August 22, 1895.

*August 23.*—Nos. 97 and 98. Economic boilers in Corcoran Building, corner Fifteenth street and Pennsylvania avenue NW., owned by estate of W. W. Corcoran. Hydrostatic pressure, 135 pounds; working pressure allowed, 80 pounds each to square inch. Expire August 23, 1895.

*August 23.*—No. 99 (2). Horizontal tubular steel boiler in plant, Thirteen-and-a-half and B streets NW., owned by the United States Electric Lighting Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 95 pounds to square inch. Expires August 23, 1895.

*August 24.*—Nos. 101 (4) and 101 (5). Horizontal tubular steel boilers in plant, Thirteen-and-a-half and B streets NW. Hydrographic pressure, 150 pounds; working pressure allowed, 85 pounds each to square inch. Expire August 24, 1895.

*August 24.*—No. 102. Horizontal tubular boiler in the Concord, corner New Hampshire avenue and Oregon street NW., owned by Dr. Gregory. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 24, 1895.

*August 24.*—No. 103. Combination boiler in power house, owned by the Rock Creek Railway. Hydrostatic pressure, 160 pounds; working pressure allowed, 105 pounds to square inch. Expires August 24, 1895.

*August 27.*—No. 104. Horizontal tubular boiler in planing mill, Thirtieth and K streets NW., owned by Wheatley Bros. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires August 27, 1895.

*August 27.*—Nos. 105 and 106. Horizontal tubular boilers in Palais Royal, Eleventh and G streets NW., owned by A. Lisner. Hydrostatic pressure, 150 pounds; working pressure allowed, 95 pounds each to square inch. Expire August 27, 1895.

*August 28.*—No. 107. Vertical tubular boiler used for hoisting purposes, owned by G. H. Turton & Son. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires August 28, 1895.

*August 28.*—No. 108. Horizontal tubular boiler in Star Building, No. 1101 Pennsylvania avenue NW. Hydrostatic pressure, 145 pounds; working pressure allowed, 90 pounds to square inch. Expires August 28, 1895.

*August 29.*—No. 109. Vertical tubular boiler in bottling works, Virginia avenue, near First street SW., owned by the Anheuser-Busch Brewing Company. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires August 29, 1895.

*August 29.*—No. 110. Horizontal tubular boiler in Post Building, E street between Thirtieth and Fourteenth streets NW., owned by the Daily Post Publishing Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 29, 1895.

*August 29.*—No. 111. Horizontal tubular boiler in Ebbitt House, Fourteenth and F streets NW., H. C. Burch, manager. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 29, 1895.

*August 31.*—No. 112. Horizontal tubular boiler in Post Building. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires August 31, 1895.

*August 31.*—No. 113. Horizontal tubular boiler in Hooe Building, Nos. 1328 to 1334 F street NW., owned by C. C. Willard. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires August 31, 1895.

*August 31.*—No. 114. Horizontal tubular boiler in Adams Building, Nos. 1333 and 1335 F street NW., owned by C. C. Willard. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds, if necessary 80 pounds, to square inch. Expires August 31, 1895.

*August 31.*—No. 115. Vertical tubular boiler in wood and coal yard, Virginia avenue and Twenty-first street NW., owned by William Muirhead. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to square inch. Condemned. Expires December 1, 1894.

*September 1.*—No. 116. Vertical tubular boiler in steam bakery, No. 1251 Thirty-second street NW., owned by Fred Stohlman. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 1, 1895.

*September 3.*—No. 117. Horizontal tubular boiler in the Ebbitt. H. C. Burch, manager. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 3, 1895.

*September 3.*—No. 118. Locomotive-form boiler in the Ebbitt. Hydrostatic pressure, 80 pounds; working pressure allowed, 50 pounds to square inch. Condemned for a new boiler. Allowed to run two months. Expires November 3, 1894.

*September 4.*—No. 119. Horizontal tubular boiler in Baltic Building, No. 606 F street NW., owned by Christian Ruppert's estate. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires September 4, 1895.

*September 4.*—Nos. 120 and 121. Horizontal tubular boilers in Palais Royal, G and Eleventh streets NW., owned by A. Lisner. Hydrostatic pressure, 150 pounds; working pressure allowed, 95 pounds to each square inch. Expires September 4, 1895.

*September 4.*—No. 122. Horizontal tubular boiler in Hooe Building, No. 1328 to 1334 F street NW. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires September 4, 1895.

*September 4.*—No. 123. Horizontal tubular boiler in Adams Building, Nos. 1333 and 1335 F street NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 4, 1895.

*September 5.*—No. 124. Horizontal tubular boiler in Department of Justice, Pennsylvania avenue NW. Hydrostatic pressure, 75 pounds; working pressure allowed, 50 pounds to square inch. Expires September 5, 1895.

*September 6.*—No. 125. Horizontal tubular boiler in Corcoran Building Pennsylvania avenue and Fifteenth street NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 6, 1895.

*September 6.*—No. 126. Water-tube boiler in gas works, Twenty-sixth and G streets NW., owned by the Washington Gaslight Company. Hydrostatic pressure, 165 pounds; working pressure allowed, 110 pounds to square inch. Expires September 6, 1895.

*September 7.*—No. 127. Vertical tubular boiler in brewery, Twenty-fifth and F streets NW., owned by the Albert Brewing Company. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires September 7, 1895.

*September 8.*—No. 128. Horizontal tubular boiler in wood yard, foot of Thirtieth street NW., owned by W. H. and C. R. Schutt. Hydrostatic pressure 110 pounds; working pressure allowed, 70 pounds to square inch. Expires September 8, 1895.

*September 10.*—No. 129. Horizontal tubular boiler in printing office, Nos. 420 and 422 Eleventh street NW., owned by Judd and Detweiler. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 10, 1895.

*September 10.*—Nos. 130 and 131. Horizontal tubular boilers in planing mill, G near First street NE., owned by Thos. W. Smith. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds each to square inch. Expire September 10, 1895.

*September 10.*—No. 132. Horizontal tubular boiler in Sun Building, Nos. 1315 and 1317 F street NW., Edwin F. Abell, trustee. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 10, 1895.

*September 11.*—No. 133. Economic boiler in steam stone works, Third street and Maine avenue SW., owned by Robert Low & Co. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires September 11, 1895.

*September 11.*—No. 134. Horizontal tubular boiler in exhaust house, Twenty-seventh and H streets NW., owned by the Washington Gaslight Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires September 11, 1895.

*September 11.*—No. 135. Locomotive-form boiler in machine shop, gas works, Twenty-sixth and G streets NW., owned by the Washington Gaslight Company. Hydrostatic pressure, 90 pounds; working pressure allowed, 40 pounds to square inch. Expires September 11, 1895.



*September 11.*—Nos. 136 and 137. National water-tube boilers, west side. Plant Thirteen-and-a-half and B streets NW., owned by the United States Electric Lighting Company. Hydrostatic pressure, 225 pounds; working pressure allowed, 150 pounds each to square inch. Expires September 11, 1895.

*September 12.*—No. 138. Water-tube boiler in gas works, Twenty-sixth and G streets NW. Hydrostatic pressure, 165 pounds; working pressure allowed, 110 pounds to square inch. Expires September 12, 1895.

*September 12.*—No. 139. Horizontal tubular boiler in asphalt works, Littlefield Wharf NW., owned by Thomas H. Thomas. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires September 12, 1895.

*September 12.*—No. 140. Vertical tubular boiler on steam roller, owned by Thos. H. Thomas. Hydrostatic pressure, 180 pounds; working pressure allowed, 120 pounds to square inch. Expires September 12, 1895.

*September 13.*—No. 141. Horizontal tubular boiler in San Building, Nos. 1315 to 1317 F street NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 13, 1895.

*September 13.*—No. 142. National water-tube boiler, west side. Plant Thirteen-and-a-half and B streets NW. Hydrostatic pressure, 225 pounds; working pressure allowed, 150 pounds to square inch. Expires September 13, 1895.

*September 14.*—No. 143. New vertical tubular boiler in machine shop, No. 1054 Thirty-first street NW., owned by Herman Hollerith. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires September 14, 1895.

*September 14.*—No. 144. Locomotive-form boiler in wood and coal yard, Virginia avenue and Sixth street SE., J. E. Rose, agent. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires September 14, 1895.

*September 14.* No. 145. Babcock & Wilcox Co. boiler in the Arlington, Vermont avenue and H street NW., T. E. Roeselle, proprietor. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires October 1, 1895.

*September 15.*—No. 146. Vertical tubular boiler in carpet-cleaning works, Fifth and K streets SE., owned by F. H. Youngs. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 15, 1895.

*September 17.*—No. 147. Horizontal tubular boiler in slaughterhouse, Bladensburg road, owned by N. Auth. Hydrostatic pressure, 135 pounds; working pressure allowed, 90 pounds to square inch. Expires September 17, 1895.

*September 17.*—No. 148. Horizontal tubular boiler in steam stone works, 407 Thirteen-and-a-half street NW., owned by C. M. Manning. Hydrostatic pressure, 125 pounds; working pressure allowed, 70 pounds to square inch. Expires September 17, 1895.

*September 18.*—No. 149. Horizontal tubular boiler in the Wormley, Fifteenth and H streets NW., Charles E. Gibbs, proprietor. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires September 18, 1895.

*September 18.*—Nos. 150, 151, and 152. Horizontal tubular boilers in Weather Bureau of Department of Agriculture, Twenty-fourth and L streets NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, each to square inch. Expires September 18, 1895.

*September 19.*—No. 153. Vertical tubular boiler in wood and coal yard, Fifth and R streets NE., owned by George W. Merrill. Hydrostatic pressure, 150 pounds; working pressure allowed 80 pounds to square inch. Expires September 19, 1895.

*September 20.*—No. 454. Horizontal tubular boiler in bottling works, Virginia avenue between Sixth and Seventh streets SW., owned by Samuel C. Palmer. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 20, 1895.

*September 20.*—No. 155. Horizontal tubular boiler in store Thirteenth and F streets NW., Craig and Harding, proprietors. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 20, 1895.

*September 20.*—No. 156. Return tubular boiler at Tenth street wharf SW., owned by Great Falls Ice Company. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires September 20, 1895.

*September 21.*—No. 157. Vertical tubular boiler at new Post-Office Building, used for hoisting purposes, owned by John Peirce. Hydrostatic pressure, 170 pounds; working pressure allowed, 110 pounds to square inch. Expires September 21, 1895.

*September 21.*—No. 158. Locomotive-form boiler at wharf, Georgetown, D. C., owned by Great Falls Ice Company. Hydrostatic pressure, 115 pounds; working pressure allowed, 70 pounds to square inch. Expires September 21, 1895.

*September 21.*—No. 159. Babcock & Wilcox Company boiler in the La Normandie, Fifteenth and I streets NW., H. M. Cake, proprietor. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires September 21, 1895.

*September 22.*—No. 160. Horizontal tubular boiler in the Wormley. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires September 22, 1895.

*September 24.*—No. 161. Horizontal tubular boiler in the Academy of Visitation, Connecticut avenue and L street NW. Hydrostatic pressure, 30 pounds; working pressure allowed, 15 pounds to square inch. Expires September 24, 1895.

*September 25.*—No. 162. Horizontal tubular boiler in Second National Bank, 509 Seventh street NW. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to square inch. Expires September 25, 1895.

*September 25.*—No. 163. Horizontal tubular boiler in store Thirteenth and F streets NW., Craig and Harding, proprietors. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 25, 1895.

*September 26.*—No. 164. Horizontal tubular boiler in the Cochran, Fourteenth and K streets NW., John C. Mulford, proprietor. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires September 26, 1895.

*September 27.*—No. 165. Horizontal tubular boiler in the Cochran. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires September 27, 1895.

*September 28.*—No. 166. Babcock & Wilcox Company boiler in La Normandie. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires September 28, 1895.

*September 28.*—No. 167. Horizontal tubular boiler in The Concord, New Hampshire avenue and Oregon street NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires September 28, 1895.

*October 1.*—Nos. 168 and 169. Horizontal tubular boilers in brickyard at Ivy City, D. C., owned by the Childs Brick Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds each to square inch. Expires October 1, 1895.

*October 1.*—No. 170. Babcock & Wilcox Company boiler in The Arlington. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires October 1, 1895.

*October 2.*—Nos. 171, 172, 173, and 174. Horizontal tubular boilers in National Museum. Hydrostatic pressure, 125 pounds; working pressure allowed, 50 pounds each to square inch. Expires October 2, 1895.

*October 3.*—No. 175. Vertical tubular boiler in steam bakery, No. 3159 O street NW., owned by H. Coppethite. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 3, 1895.

*October 3.*—No. 176. Vertical tubular boiler in wood and coal yard, owned by S. C. Carter. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires October 3, 1895.

*October 3.*—No. 177. Horizontal tubular boiler in Kellogg Building, No. 1416 F street NW., owned by H. A. Willard. Hydrostatic pressure, 110 pounds; working pressure allowed, 65 pounds to square inch. Expires October 3, 1895.

*October 4.*—No. 178. Horizontal tubular boiler in Perry Building, Pennsylvania avenue and Ninth street NW., owned by Seaton Perry. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires October 4, 1895.

*October 4.*—No. 179. New patent cast-iron boiler in Metzger Music Hall, Twelfth and F streets NW. Hydrostatic pressure, 158 pounds; working pressure allowed, 90 pounds (if necessary 100 pounds) to square inch. Expires October 4, 1895.

*October 5.*—No. 180. Locomotive form boiler in Metropolitan Hotel, W. H. Selden, proprietor. Tested by hammer test. Working pressure, 50 pounds to square inch. Expires October 5, 1895.

*October 5.*—No. 181. Vertical tubular boiler in plant Thirty-fifth and K streets NW., owned by Lewis Hopfenmair. Hydrostatic pressure, 100 pounds; working pressure allowed 55 pounds to square inch. Expires October 5, 1895.

*October 8.*—Nos. 182, 183, and 184. Horizontal tubular Coleman boilers in plant Thirteen-and-a-half and B streets NW., owned by the United States Electric Lighting Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 95 pounds each to square inch. Expires October 8, 1895.

*October 8.*—No. 185. Horizontal tubular boiler in Kellogg Building, No. 1416 F Street NW. Hydrostatic pressure, 110 pounds; working pressure allowed, 65 pounds to square inch. Expires October 8, 1895.

*October 8.*—No. 186. Vertical tubular boiler in Albany's Grand Opera House, Pennsylvania avenue and Fifteenth street NW., Edward H. Allen, manager. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 8, 1895.

*October 9.*—Nos. 187, 188, and 189. Horizontal tubular boilers in Garfield Hospital, Tenth street and Florida avenue NW. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds each to square inch. Expires October 9, 1895.

*October 9.*—Nos. 190 and 191. New horizontal tubular boilers in mill and warehouse Delaware and Florida avenues NE., owned by S. S. Daish & Son. Hydrostatic pres-



sure, 150 pounds; working pressure allowed, 80 pounds (if necessary 90 pounds) each to square inch. Expires October 9, 1895.

*October 10.*—No. 192. Vertical tubular boiler in tannery No. 709 L street SE. owned by W. D. Sullivan. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Condemned; allowed to run six months. Expires April 10, 1895.

*October 10.*—No. 193. Horizontal tubular boiler in Perry Building, Pennsylvania avenue and Ninth street NW. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires October 10, 1895.

*October 11.*—No. 194. Horizontal tubular boiler in Atlantic Building, Nos. 928-930 F street NW., owned by the Atlantic Building Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 11, 1895.

*October 12.*—No. 195. Vertical tubular boiler in restaurant, No. 602 Pennsylvania avenue NW., owned by Thomas L. Selby. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to square inch. Expires October 11, 1895.

*October 12.*—No. 196. Horizontal tubular boiler in Butler's New Bijou Theater, Ninth and C streets NW. Hydrostatic pressure, 75 pounds; working pressure allowed, 35 pounds to square inch. Expires October 12, 1895.

*October 12.*—No. 197. Horizontal tubular boiler in Intercean Building, No. 514 Ninth street NW. owned by the Intercean Building Company. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires October 12, 1895.

*October 13.*—No. 198. Locomotive form boiler in wood and coal yard, South Capitol and K streets SW. owned by John Kennedy. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires October 13, 1895.

*October 15.*—Nos. 199 (1) and 200 (2). Horizontal tubular steel boilers in plant Thirteen-and-a-half and B streets NW. owned by United States Electric Lighting Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 95 pounds each to square inch. Expires October 15, 1895.

*October 15.*—Nos. 201 and 202. Horizontal tubular boilers in National Hotel, Sixth street and Pennsylvania avenue NW., Burton, Crosby & Co. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds each to square inch. Expires October 15, 1895.

*October 15.*—No. 203. Horizontal tubular boiler in Kernan's Lyceum Theater, Eleventh and C streets NW., James L. Kernan, manager. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires October 15, 1895.

*October 16.*—No. 204. Horizontal tubular boiler in Intercean Building, No. 514 Ninth street NW. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires October 16, 1895.

*October 16.*—No. 205. Horizontal tubular boiler in Metropolitan Hotel. Hydrostatic pressure, 85 pounds; working pressure allowed, 50 pounds to square inch. Expires October 16, 1895.

*October 17.*—No. 206. Horizontal tubular boiler in Atlantic Building, 928-930 F street NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 17, 1895.

*October 17.*—No. 207. Horizontal tubular boiler in Moses Building, Eleventh and F streets NW., owned by W. B. Moses & Sons. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 17, 1895.

*October 17.*—No. 208. Vertical tubular boiler in restaurant 605 B street NW. owned by Mrs. Elizabeth Moore. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires October 17, 1895.

*October 18.*—No. 209. Horizontal tubular boiler in The Richmond, Seventeenth and H streets NW., F. W. Coleman, proprietor. Hydrostatic pressure, 100 pounds, working pressure allowed, 60 pounds to square inch. Expires October 18, 1895.

*October 18.*—No. 210. Horizontal tubular boiler in The Hamilton, Fourteenth and K streets NW., William M. Gilson, proprietor. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds (if necessary 80 pounds) to square inch. Expires October 18, 1895.

*October 18.*—Nos. 211 (1) and 212 (2). Horizontal tubular boilers in Boston House, Tenth street side, owned by Woodward & Lothrop. Hydrostatic pressure, 145 pounds; working pressure allowed, 95 pounds to square inch. Expires October 18, 1895.

*October 18.*—Nos. 213, 214, and 215. Horizontal tubular boilers in building southwest corner of Pennsylvania avenue and Thirteenth street NW., owned by the Southern Railway Company. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds each to square inch. Expires October 18, 1895.

*October 19.*—No. 216. Horizontal tubular boiler in The Arno, Sixteenth and I streets NW., William E. Prall, proprietor. Hydrostatic pressure, 85 pounds; working pressure allowed, 55 pounds to square inch. Expires October 19, 1895.

*October 22.*—No. 217. Horizontal tubular boiler in printing office southeast corner Pennsylvania avenue and Thirteenth street NW., owned by Gibson Brothers. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 22, 1895.

*October 22.*—No. 218. Horizontal tubular boiler in Moses Building, owned by W. B. Moses & Sons. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 22, 1895.

*October 22.*—No. 219. New vertical tubular boiler at new Post-Office Building, used for hoisting purposes, owned by Arthur Consill. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires October 22, 1895.

*October 23.*—No. 220. Horizontal tubular boiler in The Richmond, Seventeenth and H streets NW. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires October 23, 1895.

*October 23.*—Nos. 221 and 222. Horizontal tubular boilers in greenhouse (county, District of Columbia), owned by J. H. Small & Sons. Hydrostatic pressure, 75 pounds; working pressure allowed, 40 pounds each to square inch. Expires October 23, 1895.

*October 24.*—No. 223. Horizontal tubular boiler in the Hillman House, North Capitol and C streets NW., N. J. Hillman, proprietor. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires October 24, 1895.

*October 25.*—No. 224. Vertical tubular boiler in restaurant, Seventh and G streets NW., Osborne & Hoban, proprietors. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 25, 1895.

*October 25.*—No. 225. Horizontal tubular boiler in The Hamilton. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds (if necessary, 80 pounds) to square inch. Expires October 25, 1895.

*October 25.*—No. 226. Horizontal tubular boiler in the Academy of Music, Ninth and D streets NW., owned by Fred. W. Pratt. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires October 25, 1895.

*October 26.*—No. 227. Vertical tubular boiler in bottling works, Virginia avenue and Sixth street SW. owned by The Bergner & Engel Brewing Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 26, 1895.

*October 26.*—No. 228. Locomotive form boiler in wood and coal yard, No. 519 Four-and-a-half street SW., owned by V. Baldwin Johnson. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires October 25, 1895.

*October 26.*—No. 229. Horizontal tubular boiler in Willard's Hotel, Pennsylvania avenue and Fourteenth street NW., O. G. Staples, proprietor. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds to square inch. Expires October 26, 1895.

*October 27.*—No. 230. Vertical boiler in Thompson's Dairy, No. 511 Four-and-a-half street SW., owned by J. S. Thompson. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 27, 1895.

*October 27.*—No. 231. Horizontal tubular boiler in Havenner's Bakery, Nos. 472-476 C street NW., owned by Havenner's Baking Company. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires October 27, 1895.

*October 29.*—Nos. 232 and 233. Horizontal tubular boiler in The Portland, Vermont avenue and Fourteenth street NW., Edward L. Weston, manager. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds each to square inch. Expires October 29, 1895.

*October 30.*—No. 234. New vertical tubular boiler in The Fredonia, Nos. 1221 and 1223 H street NW., Washington Danenhower, manager. Hydrostatic pressure, 150 pounds; working pressure allowed, 70 pounds to square inch. Expires October 30, 1895.

*October 31.*—Nos. 235 (3) and 236 (4). Horizontal tubular boilers in Boston House, Tenth street side, owned by Woodward & Lothrop. Hydrostatic pressure, 145 pounds; working pressure allowed, 95 pounds each to square inch. Expires October 31, 1895.

*October 31.*—No. 237. Vertical tubular boiler in Willard's Hotel, Fourteenth street and Pennsylvania avenue NW. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds to square inch. Expires October 31, 1895.

*October 31.*—No. 138. Vertical tubular boiler in wood and coal yard, corner Eighth and O streets NW., owned by C. H. Burgess. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires October 31, 1895.

*October 31.*—No. 239. Vertical tubular boiler in Lawrence Building, No. 617 Fourteenth street NW., owned by Dr. Lawrence. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires October 31, 1895.

*November 17.*—No. 262. Vertical tubular boiler at Eleventh Street Wharf NW., owned by J. E. Donaldson. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to square inch. Expires November 11, 1895.

*November 19.*—No. 263. Vertical tubular boiler in No. 1218 C street NW., owned by Andrew Renz. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 19, 1895.

*November 19.*—No. 264 (1). Horizontal tubular boiler in terra cotta works, county, District of Columbia, owned by the Potomac Terra Cotta Company. Hydrostatic pressure, 185 pounds; working pressure allowed, 120 pounds to square inch. Expires November 19, 1895.

*November 19.*—No. 265 (2). Horizontal tubular boiler in works owned by the Potomac Terra Cotta Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Condemned; allowed to run six months. Expires May 19, 1895.

*November 19.*—Nos. 266 and 267. Horizontal tubular boiler in terra cotta works, county, District of Columbia, owned by Thomas Somerville & Sons. Hydrostatic pressure, 165 pounds; working pressure allowed, 110 pounds each to square inch. Expires November 19, 1895.

*November 20.*—Nos. 268 and 269. Horizontal tubular boiler in Hutchins Building, Tenth and D streets NW., owned by Stilson Hutchins. Hydrostatic pressure, 160 pounds; working pressure allowed, 60 pounds each to square inch. Expires November 20, 1896.

*November 21.*—No. 270. New vertical tubular boiler in steam bakery, No. 1322 Fifth street NW., owned by William H. Burk. Hydrostatic pressure, 150 pounds; working pressure allowed, 60 pounds (if necessary, 80 pounds) to square inch. Expires November 21, 1895.

*November 21.*—No. 271. Vertical tubular boiler in Hotel Lawrence. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 21, 1895.

*November 21.*—No. 272. Vertical tubular boiler in wood and coal yard, foot of Thirteen and-a-half street SW., owned by the Home Ice Company, E. M. Willis, general manager. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 21, 1895.

*November 21.*—No. 273. Vertical tubular boiler in wood and coal yard, No. 464 E street SW., owned by R. J. Collins. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires November 21, 1895.

*November 22.*—No. 274. Vertical tubular boiler in works No. 108 Second street SW., owned by Fauth & Co., G. N. Saegmuller, manager. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 22, 1895.

*November 23.*—No. 275. Vertical tubular boiler in Masonic Hall, Ninth and F streets NW. Hydrostatic pressure, 105 pounds; working pressure allowed, 65 pounds to square inch. Expires November 23, 1895.

*November 23.*—No. 276 (1). Vertical tubular boiler in National Zoological Park. Hydrostatic pressure, 105 pounds; working pressure allowed, 60 pounds to square inch. Expires November 23, 1895.

*November 23.*—No. 277 (2). Vertical tubular boiler in National Zoological Park. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires November 23, 1895.

*November 24.*—No. 278. Horizontal tubular boiler in The Oxford, New York avenue and Fourteenth street NW., H. P. Marshall & Co., proprietors. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires November 24, 1895.

*November 26.*—No. 279. Vertical tubular boiler on dredge *Roland*, owned by Thos P. Morgan. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Condemned for repairs; repaired and passed. Expires November 26, 1895.

*November 26.*—No. 280. Horizontal tubular boiler in store Twelfth and F streets NW., Robinson, Cherry & Co., proprietors. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 26, 1895.

*November 28.*—No. 281. Vertical tubular boiler in printing office No. 511 Eleventh street NW., owned by W. H. Moore & Co. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds per square inch. Expires November 28, 1895.

*November 28.*—No. 282. New horizontal tubular boiler in Fendall Building, 344 D street NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires November 28, 1895.

*November 28.*—No. 283. Compound boiler in building Seventh street and Louisiana avenue NW., owned by The Firemen's Insurance Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires November 28, 1895.



*November 1.*—No. 240. Horizontal tubular boiler in plant Thirty-fifth and K streets NW., owned by Lewis Hopfenmaier. Hydrostatic pressure, 110 pounds; working pressure allowed, 65 pounds to square inch. Expires November 1, 1895.

*November 2.*—No. 241. Vertical tubular boiler in wood and coal yard, foot of Third street SE., owned by Kinder & Co. Hydrostatic pressure, 105 pounds; working pressure allowed, 60 pounds to square inch. Condemned for repairs; repaired and passed. Expires November 2, 1895.

*November 2.*—No. 242. Vertical tubular boiler, owned by Robert Mangum. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires November 2, 1895.

*November 3.*—No. 243. Vertical tubular boiler in Banner Steam Laundry, No. 1240 Half street SE., owned by F. H. Litchfield. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 3, 1895.

*November 5.*—No. 244. Locomotive-form boiler in box factory, No. 508 R street NW., owned by R. A. Daniell. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 5, 1895.

*November 6.*—No. 245. Locomotive-form boiler in wood and coal yard, No. 3323 M street NW., owned by Tavenner & Co. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 6, 1895.

*November 6.*—No. 246. Vertical tubular boiler in wood and coal yard, Twenty-ninth street and Chesapeake and Ohio Canal NW., owned by Mayfield & Hieston. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires November 6, 1895.

*November 7.*—No. 247. Horizontal tubular boiler in The Portland. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 7, 1895.

*November 7.*—No. 248. Horizontal tubular boiler in Freedmen's Hospital. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 7, 1895.

*November 8.*—No. 249. Vertical tubular boiler in store, No. 312 Pennsylvania avenue NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch; owned by Chris. Rummeling. Expires November 8, 1895.

*November 9.*—No. 250. Patent boiler in Star Building, No. 1101 Pennsylvania avenue NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires November 9, 1895.

*November 10.*—No. 251. Vertical tubular boiler in hair factory, Anacostia, D. C., owned by H. A. Linger. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 10, 1895.

*November 12.*—No. 252. Locomotive-form boiler in machine shop, Seventh and K streets SW., owned by Forsberg & Murray. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 12, 1895.

*November 12.*—No. 253. Horizontal tubular boiler in Freedmen's Hospital. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 12, 1895.

*November 13.*—No. 254. Horizontal tubular boiler in Hotel Johnson, Thirteenth and E streets NW., owned by E. L. Johnson. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires November 13, 1895.

*November 13.*—No. 255. Vertical tubular boiler in No. 239 North Capitol street NE., owned by the National Economist Publishing Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 13, 1895.

*November 14.*—No. 256. Vertical tubular boiler in slaughterhouse, Bladensburg road, owned by F. S. Erdman & Son. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 14, 1895.

*November 14.*—No. 257. Vertical tubular boiler in dye works, No. 1955 Fourth street NW., owned by R. A. Reeves. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires November 14, 1895.

*November 15.*—No. 258. Horizontal tubular boiler in Evans Building, 1420 New York avenue NW., D. S. Evans, jr., owner. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 15, 1895.

*November 15.*—No. 259. Horizontal tubular boiler in Hotel Johnson, Thirteenth and E streets NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires November 15, 1895.

*November 15.*—No. 260. Vertical tubular boiler in mattress factory, No. 1111 Nineteenth street NW. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch; owned by H. A. Linger. Expires November 15, 1895.

*November 16.*—No. 261. Vertical tubular boiler in Hotel Lawrence, E between Thirteenth and Fourteenth streets NW., Samuel Gassenheimer, proprietor. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 16, 1895.

**November 17.**—No. 262. Vertical tubular boiler at Eleventh Street Wharf NW., owned by J. E. Donaldson. Hydrostatic pressure, 100 pounds; working pressure allowed, 50 pounds to square inch. Expires November 11, 1895.

**November 19.**—No. 263. Vertical tubular boiler in No. 1218 C street NW., owned by Andrew Renz. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 19, 1895.

**November 19.**—No. 264 (1). Horizontal tubular boiler in terra cotta works, county, District of Columbia, owned by the Potomac Terra Cotta Company. Hydrostatic pressure, 185 pounds; working pressure allowed, 120 pounds to square inch. Expires November 19, 1895.

**November 19.**—No. 265 (2). Horizontal tubular boiler in works owned by the Potomac Terra Cotta Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Condemned; allowed to run six months. Expires May 19, 1895.

**November 19.**—Nos. 266 and 267. Horizontal tubular boiler in terra cotta works, county, District of Columbia, owned by Thomas Somerville & Sons. Hydrostatic pressure, 165 pounds; working pressure allowed, 110 pounds each to square inch. Expires November 19, 1895.

**November 20.**—Nos. 268 and 269. Horizontal tubular boiler in Hutchins Building, Tenth and D streets NW., owned by Stilson Hutchins. Hydrostatic pressure, 160 pounds; working pressure allowed, 60 pounds each to square inch. Expires November 20, 1896.

**November 21.**—No. 270. New vertical tubular boiler in steam bakery, No. 1322 Fifth street NW., owned by William H. Burk. Hydrostatic pressure, 150 pounds; working pressure allowed, 60 pounds (if necessary, 80 pounds) to square inch. Expires November 21, 1895.

**November 21.**—No. 271. Vertical tubular boiler in Hotel Lawrence. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 21, 1895.

**November 21.**—No. 272. Vertical tubular boiler in wood and coal yard, foot of Thirteen-and-a-half street SW., owned by the Home Ice Company, E. M. Willis, general manager. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 21, 1895.

**November 21.**—No. 273. Vertical tubular boiler in wood and coal yard, No. 464 E street SW., owned by R. J. Collins. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires November 21, 1895.

**November 22.**—No. 274. Vertical tubular boiler in works No. 108 Second street SW., owned by Fauth & Co., G. N. Saegmuller, manager. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 22, 1895.

**November 23.**—No. 275. Vertical tubular boiler in Masonic Hall, Ninth and F streets NW. Hydrostatic pressure, 105 pounds; working pressure allowed, 65 pounds to square inch. Expires November 23, 1895.

**November 23.**—No. 276 (1). Vertical tubular boiler in National Zoological Park. Hydrostatic pressure, 105 pounds; working pressure allowed, 60 pounds to square inch. Expires November 23, 1895.

**November 23.**—No. 277 (2). Vertical tubular boiler in National Zoological Park. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires November 23, 1895.

**November 24.**—No. 278. Horizontal tubular boiler in The Oxford, New York avenue and Fourteenth street NW., H. P. Marshall & Co., proprietors. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires November 24, 1895.

**November 26.**—No. 279. Vertical tubular boiler on dredge *Roland*, owned by Thos P. Morgan. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Condemned for repairs; repaired and passed. Expires November 26, 1895.

**November 26.**—No. 280. Horizontal tubular boiler in store Twelfth and F streets NW., Robinson, Cherry & Co., proprietors. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 26, 1895.

**November 28.**—No. 281. Vertical tubular boiler in printing office No. 511 Eleventh street NW., owned by W. H. Moore & Co. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds per square inch. Expires November 28, 1895.

**November 28.**—No. 282. New horizontal tubular boiler in Fendall Building, 344 D street NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires November 28, 1895.

**November 28.**—No. 283. Compound boiler in building Seventh street and Louisiana avenue NW., owned by The Firemen's Insurance Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires November 28, 1895.



*November 29.*—No. 284. Horizontal tubular boiler in mill corner Massachusetts avenue and North Capitol street NE., owned by McDowell's Sons. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires November 29, 1895.

*November 29.*—No. 285. Horizontal tubular boiler in planing mill Twelfth street and Ohio avenue NW., owned by J. B. Hammond. Hydrostatic pressure, 155 pounds; working pressure allowed, 90 pounds, if necessary 100 pounds, to square inch. Expires November 29, 1895.

*November 30.*—No. 286. Horizontal tubular boiler in store Twelfth and F streets NW., Robinson, Cherry & Co., proprietors. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 30, 1895.

*November 30.*—No. 287. Vertical tubular boiler in printing office 664 Pennsylvania avenue NW., W. J. Brewer, owner. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires November 30, 1895.

*December 1.*—No. 288. Locomotive form boiler, owned by M. L. Price. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Condemned for repairs; repaired and passed. Expires December 1, 1895.

*December 3.*—No. 289. Vertical tubular boiler in wood and coal yard Ninth and Water streets SW., owned by Kinder & Co. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Condemned for repairs; repaired and passed. Expires December 3, 1895.

*December 3.*—No. 290. Vertical tubular boiler in wood and coal yard Delaware avenue and D street NE., owned by Elia Chelini. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires December 3, 1895.

*December 3.*—No. 291. New vertical tubular boiler in Hotel Emrich, New Jersey avenue and C street NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires December 3, 1895.

*December 4.*—Nos. 292 and 293. Horizontal tubular boilers in market Fifth and L streets NW., owned by The Northern Liberty Market Association. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds each to square inch. Expires December 4, 1895.

*December 6.*—No. 294. Vertical tubular boiler in printing office Seventh and G streets NW., owned by W. Koch. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires December 6, 1895.

*December 7.*—No. 295. Vertical tubular boiler in bottling works No. 813 Second street SE., Chas. Fleishman. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires December 7, 1895.

*December 7.*—No. 296. Vertical tubular boiler in bottling works 462 H street SW., owned by Smithson & Mazinger. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires December 7, 1895.

*December 7.*—No. 297. New horizontal tubular boiler in The Cairo, Q street between Sixteenth and Seventeenth streets NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds, if necessary 100 pounds, to square inch. Expires December 7, 1895.

*December 8.*—No. 298. Vertical tubular boiler in steam bakery Mount Pleasant, D. C., owned by Carl Hoffman. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires December 8, 1895.

*December 10.*—No. 299. Horizontal flue boiler at Stephenson's wharf foot of Seventh street SW., owned by Stephenson & Bro. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires December 10, 1895.

*December 11.*—No. 300. Vertical tubular boiler in plant 1315 Union street SW., owned by J. N. Smith. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds, to square inch. Expires December 11, 1895.

*December 12.*—No. 301. New locomotive form boiler in the Ebbitt House. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds, if necessary 100 pounds, to square inch. Expires December 12, 1895.

*December 13.*—No. 302. Water-tube boiler in building Pennsylvania avenue and Thirteenth street NW., owned by the Southern Railway Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires December 13, 1895.

*December 13.*—No. 303. Vertical tubular boiler in Chemical Works Twenty-seventh and H streets NW., owned by E. B. Warren. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds to square inch. Expires December 13, 1895.

*December 14.*—No. 304. New vertical tubular boiler in steam bakery 1811 Seventh street NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 70 pounds to square inch. Charles Specht owner. Expires December 14, 1895.

*December 14.*—No. 305. Vertical tubular boiler in works Half and I streets SE., owned by The Standard Oil Company. Hydrostatic pressure, 90 pounds; working pressure allowed, 50 pounds to square inch. Expires December 14, 1895.



*December 14.*—No. 306. Horizontal tubular boiler in The Clarendon, Fourteenth and H streets NW., Mrs. M. J. Colley, proprietress. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires December 14, 1895.

*December 14.*—No. 307. New horizontal tubular boiler in The Cairo. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds, if necessary 100 pounds, to square inch. Expires December 14, 1895.

*December 14.*—No. 308. Vertical tubular boiler in steam coffee mills Maryland avenue and C street SW., owned by W. G. Lown. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires December 14, 1895.

*December 15.*—No. 309. Vertical tubular boiler in steam bakery No. 2122 L street NW., owned by George Kleuk. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires December 15, 1895.

*December 15.*—No. 310. Vertical tubular boiler in steam bakery No. 1751 L street NW., owned by G. H. Schulze. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires December 15, 1895.

*December 17.*—No. 311. Horizontal tubular boiler in machine shop Twelfth and B streets NW., owned by J. E. Hurley. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires December 17, 1895.

*December 17.*—No. 312. Vertical tubular boiler in steam laundry No. 3237 K street NW., owned by Wells & Barber. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires December 17, 1895.

*December 17.*—No. 313. Horizontal tubular boiler in The Clarendon, Fourteenth and H streets NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires December 17, 1895.

*December 18.*—No. 314. Horizontal tubular boiler sold by Forsberg & Murray. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires December 18, 1895.

*December 18.*—No. 315. Vertical tubular boiler used for hoisting purposes, owned by Joseph F. Collins. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires December 18, 1895.

*December 18.*—No. 316. New horizontal tubular boiler in The Cairo. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds, if necessary 100 pounds, to square inch. Expires December 18, 1895.

*December 19.*—No. 317. Economic boiler in steam laundry No. 344 Pennsylvania avenue NW., owned by Dexter & Co. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires December 19, 1895.

*December 19.*—No. 318. Vertical tubular boiler in pumping station at Georgetown College. Hydrostatic pressure 90 pounds; working pressure allowed, 50 pounds to square inch. Expires December 19, 1895.

*December 19.*—No. 319. Horizontal tubular boiler in mattress factory No. 631 to 635 Massachusetts avenue NW., owned by Stumph & Bro. Hydrostatic pressure, 125 pounds; working pressure allowed, 75 pounds to square inch. Expires December 19, 1895.

*December 20.*—No. 320. Horizontal tubular boiler in Center Market, owned by The Washington Market Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires December 20, 1895.

*December 20.*—No. 321. Locomotive form boiler in wood and coal yard No. 910 Virginia avenue SE., owned by R. Ullman. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires December 20, 1895.

*December 20.*—No. 322. Vertical tubular boiler in Mount Vernon Seminary, Eleventh and M streets NW., owned by Mrs. E. Somers. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires December 20, 1895.

*December 22.*—No. 323. New vertical tubular boiler in slaughterhouse, Bladensburg road, owned by Anton Ruppert. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires December 22, 1895.

*December 28.*—No. 324. Ellis patent boiler on dredge *Morgan*, owned by Thos. P. Morgan. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires December 28, 1895.

## INSPECTED IN 1895.

*January 1.*—Nos. 325 and 326. Horizontal tubular boilers in mill First street and Indiana avenue NW., owned by W. M. Galt & Co. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds each to square inch. Expires January 1, 1896.

*January 2.*—No. 327. Vertical tubular boiler in Montrose Flats, No. 1115 Ninth street NW. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires January 2, 1896.

*January 3.*—No. 328. Vertical tubular boiler in the American House, Pennsylvania avenue and Seventh street NW., Duffy & Leannarda, proprietors. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires January 3, 1896.

*January 3.*—No. 329. Vertical tubular boiler in steam laundry at Seventh street wharf SW., owned by the Norfolk and Washington Steamboat Company. Hydrostatic pressure, 75 pounds; working pressure allowed, 50 pounds to square inch. Condemned for repairs; repaired and passed. Expires January 3, 1896.

*January 5.*—No. 330. Vertical tubular boiler at new post office building, owned by John Peirce. Hydrostatic pressure, 165 pounds; working pressure allowed, 110 pounds to square inch. Expires January 5, 1896.

*January 6.*—Nos. 331 and 332. New horizontal tubular boilers in United States Senate annex, New Jersey avenue and B street NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds each to square inch. Expires January 6, 1896.

*January 8.*—No. 333. Horizontal tubular boiler in Warder Building, southeast corner Ninth and F streets NW., owned by estate of B. H. Warder. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires January 8, 1896.

*January 8.*—No. 334. Horizontal tubular boiler in building No. 458 to 464 Louisiana avenue NW., owned by the National Capital Investment Company. Hydrostatic pressure, 130 pounds; working pressure allowed, 85 pounds to square inch. Expires January 8, 1896.

*January 10.*—No. 335. Horizontal tubular boiler in building Nos. 458 to 464 Louisiana avenue NW. Hydrostatic pressure, 130 pounds; working pressure allowed, 85 pounds to square inch. Expires January 10, 1896.

*January 10.*—No. 336. Horizontal tubular boiler in Warder Building, southeast corner Ninth and F streets NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires January 10, 1896.

*January 12.*—No. 337. Vertical tubular boiler in steam bakery, No. 711 Twelfth street SE., owned by J. G. Meinberg. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires January 12, 1896.

*January 14.*—No. 338. Vertical tubular boiler in mill, Virginia avenue and Four-and-a-half street SW., owned by the Washington Flour and Feed Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires January 14, 1896.

*January 15.*—No. 339. Vertical tubular boiler in building southwest corner Tenth street and Pennsylvania avenue NW., owned by the Washington Times Company. Hydrostatic pressure, 110 pounds; working pressure allowed, 90 pounds to square inch. Expires January 15, 1896.

*January 16.*—Nos. 340 (4) and 341 (5). Horizontal tubular boilers in works Fifteenth and E streets NE., owned by the Hygienic Ice Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds each to square inch. Expires January 16, 1896.

*January 21.*—Nos. 342 and 343. Horizontal tubular boilers in No. 929 to 931 D street NW., owned by the Evening News Publishing Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds each to square inch. Expires January 21, 1896.

*January 22.*—No. 344. Vertical tubular boiler at new post-office building, owned by John Peirce. Hydrostatic pressure, 165 pounds; working pressure allowed, 110 pounds to square inch. Expires January 22, 1896.

*January 23.*—No. 345. Locomotive boiler in wood yard, New Hampshire and Virginia avenues NW., owned by C. C. Walker. Hydrostatic pressure, 100 pounds; working pressure allowed, 65 pounds to square inch. Expires January 23, 1896.

*January 24.*—No. 346. Vertical tubular boiler at new Corcoran Gallery of Art, owned by Norcross Bros. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires January 24, 1896.

*January 26.*—No. 347. New vertical tubular boiler used for hoisting purposes, owned by Manning & Parsons. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires January 26, 1896.

*January 31.*—No. 348. New vertical tubular boiler used for hoisting purposes, owned by Manning & Parsons. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires January 31, 1896.

*January 31.*—No. 349. Vertical tubular boiler in steam coffee mills in rear of 327 Pennsylvania avenue NW., owned by Browning & Baines. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires January 31, 1896.

*February 1.*—No. 350. Vertical tubular boiler in The Page, No. 721 to 727 Fifteenth street NW., T. L. Page, proprietor. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires February 1, 1896.

*February 2.*—No. 351. Locomotive form boiler in yard, No. 2632 D street NW., owned by the Crawford Paving Company. Hydrostatic pressure, 115 pounds; working pressure allowed, 70 pounds to square inch. Expires February 2, 1896.

*February 4.*—No. 352. Vertical tubular boiler in Eagle Iron Works, Fourteenth and B streets NW., owned by Pettit & Dripps. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires February 4, 1896.

*February 4.*—No. 353. Horizontal tubular boiler in printing office, No. 1308 Pennsylvania avenue NW., owned by R. H. Darby. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires February 4, 1896.

*February 5.*—No. 354. New vertical tubular boiler in German Orphan Asylum, Anacostia, D. C. Hydrostatic pressure, 150 pounds; working pressure allowed, 60 pounds, if necessary 80 pounds, to square inch. Expires February 5, 1896.

*February 11.*—Nos. 355 (2) and 356 (3). Horizontal tubular boilers in works, Fifteenth and E streets NE., owned by the Hygienic Ice Co. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds each to square inch. Expire February 11, 1896.

*February 12.*—Nos. 357 (7) and 358 (8). Campbell & Zell improved boilers in plant, Thirteen-and-a-half and B streets NW., owned by United States Electric Lighting Company. Hydrostatic pressure, 200 pounds; working pressure allowed, 130 pounds each to square inch. Expire February 12, 1896.

*February 13.*—Nos. 359 (4) and 360 (6). National water-tube boilers in plant, Thirteen-and-a-half and B streets NW. Hydrostatic pressure, 200 pounds; working pressure allowed, 130 pounds each to square inch. Expire February 13, 1896.

*February 14.*—No. 361. Horizontal tubular boiler in Center Market, Pennsylvania avenue and Seventh street NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires February 14, 1896.

*February 15.*—No. 362 (2). National water-tube boiler in plant, Thirteen-and-a-half and B streets NW. Hydrostatic pressure, 200 pounds; working pressure allowed, 130 pounds to square inch. Expires February 15, 1896.

*February 16.*—No. 363. Horizontal tubular boiler in Yale Steam Laundry, No. 43 G street NW., owned by F. H. Walker & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires February 16, 1896.

*February 18.*—No. 364. Economic boiler in Metzert Music Hall. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Condemned for repairs, repaired and passed. Expires February 18, 1896.

*February 19.*—No. 365. Horizontal tubular boiler in club house, No. 1732 G street NW., owned by Columbia Athletic Club. Hydrostatic pressure, 80 pounds; working pressure allowed, 50 pounds to square inch. Expires February 19, 1896.

*February 19.*—No. 366. Vertical tubular boiler at new post-office building, owned by John Peirce. Hydrostatic pressure, 160 pounds; working pressure allowed, 105 pounds to square inch. Expires February 19, 1896.

*February 21.*—No. 267. Horizontal tubular boiler in Center Market, Pennsylvania avenue and Seventh street NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires February 21, 1896.

*February 21.*—No. 368. Vertical tubular boiler in National Homeopathic Hospital. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires February 21, 1896.

*February 21.*—No. 369. Vertical tubular boiler in laundry at National Homeopathic Hospital. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires February 21, 1896.

*February 21.*—Nos. 370 and 371. Babcock & Wilcox Company boilers in power house, foot of Sixth street SW., owned by the Washington and Georgetown Railroad Company. Hydrostatic pressure, 200 pounds; working pressure allowed, 125 pounds each to square inch. Expire February 21, 1896.

*February 22.*—No. 372. Horizontal tubular boiler in building No. 918 F street NW., owned by the National Union Insurance Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires February 22, 1896.

*February 23.*—No. 373. Vertical tubular boiler in slaughterhouse, Bladensburg road, owned by John Augusterfer. Hydrostatic pressure, 80 pounds; working pressure allowed, 55 pounds to square inch. Condemned for repairs, repaired and passed. Allowed to run six months. Expires August 23, 1895.

*February 26.*—Nos. 374 and 375. Horizontal tubular boilers in brewery, D between Thirteenth and Fourteenth streets SE., owned by the National Capital Brewing Company. Hydrostatic pressure, 135 pounds; working pressure allowed, 90 pounds each to square inch. Expire February 26, 1896.

*February 28.*—No. 376. Vertical tubular boiler in plant, No. 461 to 463 C street NW., owned by the National Lithographing Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires February 28, 1896.

*February 28.*—No. 377. Vertical tubular boiler in steam bakery, 18 Harrison street, Anacostia, D. C., owned by Frederick W. Bergmann. Hydrostatic pressure, 100 pounds; working pressure allowed, 65 pounds to square inch. Expires February 28, 1896.



*March 1.*—No. 378. Vertical tubular boiler in Slater's Fourteenth street Steam Laundry. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires March 1, 1896.

*March 4.*—Nos. 379 and 380. New Campbell & Zell boilers in power house, Benning's road NE., owned by the Columbia Railway Company. Hydrostatic pressure, 205 pounds; working pressure allowed, 125 pounds each to square inch. Expires March 4, 1896.

*March 5.*—No. 381. Babcock & Wilcox Company boiler in power house, foot Sixth street SW. Hydrostatic pressure, 200 pounds; working pressure allowed, 125 pounds to square inch. Expires March 5, 1896.

*March 7.*—No. 382. Horizontal tubular boiler in brewery, D street between Thirteenth and Fourteenth streets SE. Hydrostatic pressure, 135 pounds; working pressure allowed, 90 pounds to square inch. Expires March 7, 1896.

*March 8.*—No. 383. Vertical tubular boiler in mill, Anacostia, D. C., owned by J. N. Garrison & Sons. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires March 8, 1896.

*March 8.*—Nos. 384 and 385. Horizontal tubular boilers in yard, No. 2632 D street NW., owned by the Cranford Paving Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds each to square inch; used for stone crusher. Expires March 8, 1896.

*March 12.*—No. 386. Vertical tubular boiler on steam roller Pioneer, owned by the Cranford Paving Company. Hydrostatic pressure, 200 pounds; working pressure allowed, 120 pounds to square inch. Expires March 12, 1896.

*March 12.*—No. 387. Vertical tubular boiler on steam roller Percy, owned by the Cranford Paving Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 100 pounds to square inch. Expires March 12, 1896.

*March 12.*—No. 388. Vertical tubular boiler on steam roller Ludwig, owned by the Cranford Paving Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 100 pounds to square inch. Expires March 12, 1896.

*March 13.*—No. 389. Vertical tubular boiler at new post-office building, owned by John Peirce. Hydrostatic pressure, 165 pounds; working pressure allowed, 105 pounds to square inch. Condemned for repairs, repaired and passed. Expires March 13, 1896.

*March 13.*—No. 390. Vertical tubular boiler in Emergency Hospital. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires March 13, 1896.

*March 13.*—No. 391. Vertical tubular boiler in warehouse, Third and R streets NE., owned by James H. McGill. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires March 13, 1896.

*March 14.*—No. 392. Vertical tubular boiler in printing office, No. 1108 to 1116 E street NW., owned by H. L. McQueen. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires March 14, 1896.

*March 18.*—No. 393. Horizontal tubular boiler in soap factory, First and W streets SW., owned by C. B. Jewell & Co. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires March 18, 1896.

*March 18.*—No. 394. New economic boiler in brickyard, South Capitol and O streets SE., owned by the Alfred Richards Brick Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires March 18, 1896.

*March 22.*—No. 395. Horizontal tubular boiler in soap factory, First and W streets SW., owned by C. B. Jewell & Co. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires March 22, 1896.

*March 22.*—No. 396. Horizontal tubular boiler in The Randall, Pennsylvania avenue and Fifteenth street NW., John T. Trego, proprietor. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires March 22, 1896.

*March 25.*—No. 397. Vertical tubular boiler in the Briggs New York Dye Works, E. K. Plant, manager and proprietor, No. 709 Ninth street NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires March 25, 1896.

*March 25.*—No. 398. Horizontal tubular boiler in planing mill, Thirteenth and C streets NW., owned by Belt & Dyer. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires March 25, 1896.

*March 25.*—No. 399. Horizontal tubular boiler in brickyard, Nineteenth and B streets NE., owned by Thomas Potee & Co. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires March 25, 1896.

*March 26.*—Nos. 400 and 401. Horizontal tubular boilers in brickyard at Ivy City, D. C., owned by the Ivy City Brick Company. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds each to square inch. Expires March 26, 1896.

*March 26.*—No. 402. Horizontal tubular boiler in brewery, D street between Thirteenth and Fourteenth streets SE., owned by the National Capital Brewing Company. Hydrostatic pressure, 135 pounds; working pressure allowed, 90 pounds to square inch. Expires March 26, 1896.

*March 27.*—No. 403. Horizontal tubular boiler in The Randall, Pennsylvania avenue and Fifteenth street NW. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires March 27, 1896.

*March 27.*—No. 404. Vertical tubular boiler in works, No. 3220 K street NW., used for hoisting purposes, owned by the Potomac Stone Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 85 pounds (if necessary 100 pounds) to square inch. Expires March 27, 1896.

*March 29.*—No. 405. Horizontal tubular boiler in machine shop and foundry, No. 3105 K street NW., owned by Donnelly & Pruett. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires March 29, 1896.

*March 29.*—No. 406. Vertical tubular boiler in foundry, foot of Thirty-third street NW., owned by Stewart, Garner & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires March 29, 1896.

*March 29.*—Nos. 407 and 408. Cylinder boilers at shipping wharf N.V., owned by John P. Agnew & Co. Hydrostatic pressure, 145 pounds; working pressure allowed, 90 pounds each to square inch. Condemned for repairs; repaired and passed. Expires March 29, 1896.

*March 30.*—No. 409. Vertical tubular boiler at gas works, Twenty-sixth and G streets NW., used for hoisting purposes, owned by the Washington Gas Light Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires March 30, 1896.

*April 1.*—Nos. 410 and 411. Horizontal tubular boilers in guano factory, Giesboro, D. C., owned by P. Mann. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds each to square inch. Expires April 1, 1896.

*April 2.*—Nos. 412 and 413. New vertical tubular boilers, used for hoisting purposes, owned by Frank N. Carver. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds each to square inch. Expires April 2, 1896.

*April 2.*—No. 414. Horizontal tubular boiler in power house, Brightwood avenue NW., owned by the Brightwood Railway Company. Hydrostatic pressure, 180 pounds; working pressure allowed, 120 pounds to square inch. Expires April 2, 1896.

*April 3.*—No. 415. Vertical tubular boiler in dye works, No. 114 Four-and-a-half street NW., owned by Birkner & Co. Hydrostatic pressure, 100 pounds; working pressure allowed, 80 pounds to square inch, condemned for repairs; repaired and passed. Expires April 3, 1896.

*April 3.*—No. 416. Horizontal tubular boiler in mill, No. 425-429 New Jersey avenue NW., owned by Lyell & Mohler. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires April 3, 1896.

*April 3.*—Nos. 417 and 418. Horizontal tubular boilers, sold by Forsberg & Murray. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds each to square inch. Expires April 3, 1896.

*April 4.*—No. 419. Vertical tubular boiler in greenhouse, Blandensburg road, owned by C. Strauss & Co. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds (if necessary 100 pounds) to square inch. Expires April 4, 1896.

*April 5.*—No. 420. Horizontal tubular boiler in Capital Steam Laundry, No. 512 Eighth street NW., owned by Mrs. M. A. Weaver. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires April 5, 1896.

*April 5.*—No. 421. New vertical tubular boiler used for pumping purposes, owned by Shailer & Schniglan Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires April 5, 1896.

*April 6.*—No. 422. Horizontal tubular boiler in brewery, Fourth and E streets NE., owned by the Washington Brewery Company. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires April 6, 1896.

*April 8.*—Nos. 423 and 424. Economic boilers in brickyard, Ivy City, D. C., owned by the Childs Brick Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds each to square inch. Expires April 8, 1896.

*April 8.*—Nos. 425 and 426. Horizontal tubular boilers in planing mill, Thirteenth and B streets NW., owned by E. E. Jackson & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds each to square inch. Expires April 8, 1896.

*April 9.*—No. 427. Economic boiler in slaughterhouse, No. 1340 Twenty-second street NW., owned by J. J. Pfuerger. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires April 9, 1896.

*April 9.*—No. 428. Horizontal tubular boiler in brickyard, Florida avenue NE., owned by the Washington Brick Company. Hydrostatic pressure, 155 pounds; working pressure allowed, 90 pounds (if necessary 100 pounds) to square inch. Expires April 9, 1896.

*April 9.*—No. 429. Horizontal tubular boiler in brickyard, Ivy City, D. C., owned by The Ivy City Brick Company. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires April 9, 1896.

*April 10.*—No. 430. Vertical tubular boiler in slaughterhouse, Bladensburg road, owned by Santus Auth. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires April 10, 1896.



*April 10.*—Nos. 431 and 432. New horizontal tubular boilers in building, Eighth street and Market space NW., owned by S. Kann Sons & Co. Hydrostatic pressures 150 pounds; working pressure allowed, 80 pounds each to square inch. Expire, April 10, 1896.

*April 10.*—No. 433. Horizontal tubular boiler in power house, Brightwood avenue NW., owned by the Brightwood Railway Company. Hydrostatic pressure, 180 pounds; working pressure allowed, 120 pounds to square inch. Expires April 10, 1896.

*April 11.*—No. 434. Locomotive-form boiler in United States Government Printing Office. Hydrostatic pressure, 145 pounds; working pressure allowed, 90 pounds to square inch. Expires April 11, 1896.

*April 11.*—No. 435. Horizontal tubular boiler in National Theater, W. W. Rapley, manager. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires April 11, 1896.

*April 12.*—No. 436. Horizontal tubular boiler in brewery, Fourth and E streets NE., owned by the Washington Brewery Company. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires April 12, 1896.

*April 12.*—No. 437 (3). Horizontal tubular boiler in planing mill, Thirteenth and B streets NW., owned by E. E. Jackson & Co. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Condemned for repairs; repaired and passed. Expires April 12, 1896.

*April 13.*—No. 438. Vertical tubular boiler used for pumping purposes, owned by Shailer & Schniglan Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds (if necessary 100 pounds) to square inch. Expires April 13, 1896.

*April 13.*—No. 439. Economic boiler used for pumping purposes, owned by Shailer & Schniglan Company. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires April 13, 1896.

*April 13.*—No. 440. Economic boiler in stone works, No. 3220 K street NW., owned by the Potomac Stone Company. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires April 13, 1896.

*April 15.*—No. 441. Vertical tubular boiler in wood and coal yard, No. 3041 K street NW., owned by A. Geary Johnson. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires April 15, 1896.

*April 16.*—Nos. 442 and 443. Horizontal tubular boilers in works foot of Thirty-third street NW., owned by Lewis Hopfenmaier. Hydrostatic pressure, 120 pounds; working pressure allowed, 60 pounds (if necessary 80 pounds) each to square inch. Expires April 16, 1896.

*April 16.*—No. 444. Locomotive-form boiler in cycle works, No. 809 Water street SW., owned by D. S. Owen Manufacturing Company. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Condemned for repairs; repaired and passed. Expires April 16, 1896.

*April 16.*—No. 445. New horizontal tubular boiler in warehouse, No. 1140 Fifteenth street NW., owned by the American Security and Trust Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires April 16, 1896.

*April 17.*—No. 446. Horizontal tubular boiler in power house, Brightwood avenue NW., owned by the Brightwood Railway Company. Hydrostatic pressure, 180 pounds; working pressure allowed, 120 pounds to square inch. Expires April 17, 1896.

*April 18.*—No. 447. Horizontal tubular boiler in National Theater, W. W. Rapley, manager. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires April 18, 1896.

*April 18.*—No. 448. Vertical tubular boiler in bottling works, Nos. 703 to 705 North Capitol street NE., owned by the Pabst Brewing Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires April 18, 1896.

*April 19.*—Nos. 449 and 450. Horizontal tubular boiler in brewery, Fourth and E streets NE., owned by the Washington Brewery Company. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds each to square inch. Expire April 19, 1896.

*April 19.*—No. 451. Horizontal tubular boiler in brewery, Nos. 1221 to 1233 Twentieth street NW., owned by the Christian Heurich Brewing Company. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires April 19, 1896.

*April 20.*—No. 452. Vertical tubular boiler in steam bakery, Nos. 119 to 123 First street SW., owned by H. B. Leary. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires April 20, 1896.

*April 20.*—No. 453. Vertical tubular boiler in steam bakery, Sixth and G streets NW., owned by Mrs. F. Stolpp. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires April 20, 1896.



*April 20.*—Nos. 454 and 455. Horizontal tubular boilers in printing office, No. 1729 New York avenue NW., owned by George E. Lemon. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds each to square inch. Boiler No. 454, condemned for repairs, repaired and passed. Expires April 20, 1896.

*April 22.*—No. 456. Horizontal tubular boiler in slaughterhouse, No. 1332 Twenty-second street NW., owned by G. L. Botschs's Sons. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires April 22, 1896.

*April 22.*—No. 457. Horizontal tubular boiler in stable, P street NW., owned by the Metropolitan Railroad Company. Hydrostatic pressure, 80 pounds; working pressure allowed, 50 pounds (if necessary 60 pounds) to square inch. Expires April 22, 1896.

*April 23.*—No. 458. Locomotive from boiler in plant foot of Third street SE., owned by the Great Falls Ice Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires April 23, 1896.

*April 23.*—No. 459. Vertical tubular boiler in Troy Steam Laundry, No. 731 Ninth street NW. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires April 23, 1896.

*April 24.*—No. 460. Vertical tubular boiler in mill, James Creek Canal between N and O streets SW., owned by McDonald & Co. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires April 24, 1896.

*April 24.*—No. 461. Horizontal tubular boiler in foundry, corner Seventh and I streets SW., owned by John Springman. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires April 24, 1896.

*April 25.*—No. 462. Horizontal tubular boiler in warehouse, No. 1140 Fifteenth street NW. Hydrostatic pressure, 145 pounds; working pressure allowed, 90 pounds to square inch. Expires April 25, 1896.

*April 25.*—No. 463. Horizontal tubular boiler in power house, Eckington, D. C., owned by the Eckington and Soldiers' Home Railway Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires April 25, 1896.

*April 26.*—No. 464. Vertical tubular boiler in steam bakery, No. 209 G street NE., owned by G. W. Haas. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires April 26, 1896.

*April 26.*—No. 465. Vertical tubular boiler in wood and coal yard, No. 1325 First street SW., owned by B. Underwood. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires April 26, 1896.

*April 26.*—No. 466. Economic boiler (used for stone crusher) in works, Twenty-sixth and D streets NW., owned by the Barber Asphalt Paving Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires April 26, 1896.

*April 26.*—No. 467. Horizontal tubular boiler in works, Twenty-sixth and D streets NW., used for mixing asphaltum; owned by the Barber Asphalt Paving Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires April 26, 1896.

*April 29.*—Nos. 468 and 469. Horizontal tubular boilers in Glover Building, No. 1419 F street NW. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds each to square inch. Expires April 29, 1896.

*April 29.*—No. 470. Horizontal tubular boiler in brickyard, Delaware avenue and O street, SW., owned by the Washington Brick and Terra Cotta Company. Hydrostatic pressure, 145 pounds; working pressure allowed, 90 pounds to square inch. Expires April 29, 1896.

*April 30.*—No. 471. Horizontal tubular boiler in the Harrison, Third and G streets NW.; owned by Harvey Spalding. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires April 30, 1896.

*April 30.*—No. 472. Vertical tubular boiler in Fleming Building, No. 1419 G street NW.; owned by Judge W. S. Cox. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires April 30, 1896.

*May 1.*—No. 473. Horizontal tubular boiler in brewery, Nos. 1221 to 1233 Twentieth street, NW., owned by the Christian Heurich Brewing Company. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires May 1, 1896.

*May 1.*—No. 474. Horizontal tubular boiler in Lenman Building, No. 1425 New York avenue NW.; owned by estate of J. T. Lenman. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires May 1, 1896.

*May 2.*—No. 475. Horizontal tubular boiler in building, No. 918 F street NW., owned by the National Union Insurance Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 2, 1896.

*May 3.*—No. 476. Vertical tubular boiler in gas works, No. 1128 Twenty-ninth street NW., owned by the Georgetown Gas Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires May 3, 1896.



*May 3.*—No. 477. Vertical tubular boiler in steam bakery, No. 2315 L street NW., owned by P. Stanton. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires May 3, 1896.

*May 4.*—No. 478. Vertical tubular boiler in steam bakery, No. 647 H street NE., owned by Robert W. Blair. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires May 4, 1896.

*May 6.*—No. 479. Horizontal tubular boiler in slaughterhouse, No. 2717 Seventh street NW., owned by Jacob Franz. Hydrostatic pressure, 125 pounds; working pressure allowed, 70 pounds to square inch. Expires May 6, 1896.

*May 6.*—No. 480. Horizontal tubular boiler in soap factory, K between Thirty-second and Thirty-third streets NW., owned by Weaver, Kengla & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 6, 1896.

*May 7.*—No. 481. Horizontal tubular boiler in dye works, Nos. 1206 to 1208 I street NW., owned by Anton Lerch. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires May 7, 1896.

*May 7.*—No. 482. Horizontal tubular boiler in Lenman Building, No. 1425 New York avenue NW. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires May 7, 1896.

*May 7.*—No. 483. Horizontal tubular boiler in The Harrison, Third and G streets NW. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires May 7, 1896.

*May 7.*—No. 484. Vertical tubular boiler in No. 1217 Pennsylvania avenue NW., owned by The Evening News Publishing Company. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires May 7, 1896.

*May 8.*—No. 485. Vertical tubular boiler in gas works, No. 1128 Twenty-ninth street NW. Hydrostatic pressure, 115 pounds; working pressure allowed, 70 pounds to square inch. Expires May 8, 1896.

*May 8.*—No. 486. Horizontal tubular boiler in brickyard, Delaware avenue and O street SW., owned by The Washington Brick and Terra Cotta Company. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires May 8, 1896.

*May 8.*—No. 487. Locomotive-form boiler in wood and coal yard, Virginia and Delaware avenues SW., owned by Walter H. Marlow. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Condemned for repairs; repaired and passed June 29, 1895. Expires June 29, 1896.

*May 8.*—No. 488. Horizontal tubular boiler in brickyard, Twenty-first and A streets SE., owned by The Capitol Hill Brick Company, C. R. Monroe, manager. Hydrostatic pressure, 125 pounds; working pressure allowed, 60 pounds (if necessary 70 pounds) to square inch. Expires May 8, 1896.

*May 9.*—No. 489. Horizontal tubular boiler in Government Printing Office. Hydrostatic pressure, 140 pounds; working pressure allowed, 80 pounds to square inch. Expires May 9, 1896.

*May 10.*—No. 490. Coil boiler in factory, No. 512 North Capitol street, owned by the Forster Bros. Manufacturing Company, H. S. Martin, manager. Hydrostatic pressure, 200 pounds; working pressure allowed, 120 pounds to square inch. Expires May 10, 1896.

*May 10.*—No. 491. New vertical tubular boiler in No. 423 Four-and-a-half street SW., owned by A. Oehmann. Hydrostatic pressure, 150 pounds; working pressure allowed, 90 pounds to square inch. Expires May 10, 1896.

*May 10.*—No. 492. Vertical tubular boiler in steam carpet cleaning works, No. 1706 to 1708 E street NW., M. Neumyer, manager. Hydrostatic pressure 100 pounds; working pressure allowed, 40 pounds to square inch. Expires May 10, 1896.

*May 11.*—No. 493. Vertical tubular boiler in steam bakery, No. 476 L street SW., owned by C. E. Berger. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires May 11, 1896.

*May 11.*—No. 494. Horizontal tubular boiler in building, corner New York avenue and Fifteenth street NW., owned by the National Safe Deposit Company. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires May 11, 1896.

*May 13.*—No. 495. Locomotive-form boiler in West End Steam Laundry, No. 1755 Pennsylvania avenue NW., owned by Henry Wagner. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires May 13, 1896.

*May 13.*—No. 496. Horizontal tubular boiler in planing mill, Nos. 451 to 465 Maryland avenue SW., owned by Wood & Co. Hydrostatic pressure, 125 pounds; working pressure allowed, 70 pounds to square inch. Expires May 13, 1896.

*May 14.*—No. 497. Vertical tubular boiler used for hoisting purposes, owned by Henry F. Getz. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires May 14, 1896.

*May 14.*—No. 498. Vertical cylinder boiler in yard, Thirteenth and E streets SW., owned by the Southern Railway Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires May 14, 1896.



*May 14.*—No. 499. New water-tube boiler in works, Nos. 458 and 460 Pennsylvania avenue NW., owned by The Norris Peter's Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 60 pounds (if necessary 80 pounds) to square inch. Expires May 14, 1896.

*May 15.*—No. 500. Horizontal tubular boiler in building, corner New York avenue and Fifteenth street NW., owned by the National Safe Deposit Company. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires May 15, 1896.

*May 15.*—No. 501. New vertical tubular boiler in wood and coal yard, corner Fourteenth and C streets NW., owned by Miller, Robbins & Co. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires May 15, 1896.

*May 15.*—No. 502. Vertical tubular boiler on steam roller No. 5, owned by the Barber Asphalt Paving Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 110 pounds to square inch. Expires May 15, 1896.

*May 15.*—No. 503. Horizontal tubular boiler in power house, Thirty-second street NW., owned by the Georgetown and Tenallytown Railway Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 105 pounds to square inch. Expires May 15, 1896.

*May 16.*—No. 504. Horizontal tubular boiler in power house, Third street NW. Hydrostatic pressure, 160 pounds; working pressure allowed, 105 pounds to square inch. Expires May 16, 1896.

*May 16.*—No. 505. Vertical tubular boiler in plant, Nos. 18 to 22 Harrison street, Anacostia, D. C., owned by J. S. Fowler. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 16, 1896.

*May 17.*—No. 506. Vertical tubular boiler in plant foot of G street NW., used for hoisting purposes, owned by J. Maury Dove. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires May 17, 1896.

*May 17.*—No. 507. Vertical tubular boiler, Twenty-eighth and K streets NW., owned by J. Maury Dove, used for hoisting purposes. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires May 17, 1896.

*May 18.*—No. 508. Horizontal tubular boiler in brick yard, South Capitol and N streets SW., owned by Charles Ford. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 18, 1896.

*May 20.*—No. 509. Horizontal tubular boiler in carpet cleaning works, No. 488 Maine avenue SW., owned by M. R. Thorp. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 20, 1896.

*May 20.*—No. 510. Horizontal tubular boiler in mortar works, South Capitol and I streets SW., owned by the National Mortar Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires May 20, 1896.

*May 20.*—No. 511. Horizontal tubular boiler at wharf, foot of Thirtieth street NW., owned by Meredith, Winship & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 20, 1896.

*May 20.*—No. 512. Vertical tubular boiler in works, South Capitol and R streets SE., used for hoisting purposes, owned by the Washington Asphalt Block and Tile Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 20, 1896.

*May 21.*—No. 513. Vertical tubular boiler in slaughterhouse, Seventeenth street NE., owned by F. P. Seibert. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires May 21, 1896.

*May 22.*—No. 514. Vertical tubular boiler in Corcoran Gallery of Art, Pennsylvania avenue and Seventeenth street NW. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires May 22, 1896.

*May 22.*—No. 515. Horizontal tubular boiler in power house, Thirty-second street NW., owned by the Georgetown and Tenallytown Railway Company. Hydrostatic pressure, 160 pounds to square inch; working pressure allowed, 105 pounds to square inch. Expires May 22, 1896.

*May 23.*—No. 516. National water-tube boiler in the Raleigh, northeast corner Pennsylvania avenue and Twelfth street NW., B. W. Frazier, manager. Hydrostatic pressure, 145 pounds; working pressure allowed, 95 pounds to square inch. Expires May 23, 1896.

*May 24.*—No. 517. Vertical tubular boiler at wharf, K street NW., owned by the Independent Ice Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires May 24, 1896.

*May 24.*—No. 518. Babcock & Wilcox Company boiler in the Shoreham, Fifteenth and H streets NW., John T. Devine, proprietor. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires May 24, 1896.

*May 24.*—No. 519. Horizontal tubular boiler in the St. James Hotel, Pennsylvania avenue and Sixth street NW., Levi Woodbery, proprietor. Hydrostatic pressure, 130 pounds; working pressure allowed, 80 pounds to square inch. Expires May 24, 1896.

*May 25.*—No. 520. Vertical tubular boiler in wood and coal yard, No. 609 New York avenue NW., owned by Thomas M. Draney. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires May 25, 1896.

*May 25.*—No. 521. Vertical tubular boiler on lighter *Chesapeake*, owned by Littlefield, Alvord & Co. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires May 25, 1896.

*May 25.*—No. 522. Vertical tubular boiler in steam bakery, Eighth and M streets NW., Adolf Gassman, proprietor. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires May 25, 1896.

*May 27.*—No. 523. Horizontal tubular boiler in Galvanized Iron Works, Nos. 215 to 221 Fourteenth street NW., owned by the National Mould and Stamping Company, D. W. Stockstill, manager. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 27, 1896.

*May 27.*—Nos. 524, 525, and 526. New water-tube boilers in power house, Four-and-a-half street SW., owned by the Metropolitan Railroad Company. Hydrostatic pressure, 200 pounds; working pressure allowed, 125 pounds each to square inch. Expires May 27, 1896.

*May 28.*—No. 527. Horizontal tubular boiler in Union Building, G street between Sixth and Seventh streets NW., owned by the Union Building Company. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires May 28, 1896.

*May 29.*—No. 528. Horizontal flue boiler in machine shop, No. 487 Missouri avenue NW., owned by Corbett Mill and Machine Company. Hydrostatic pressure, 125 pounds; working pressure allowed, 60 pounds to square inch. Expires May 29, 1896.

*May 29.*—No. 529. Horizontal tubular boiler in St. James Hotel, Pennsylvania avenue and Sixth street NW. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires May 29, 1896.

*May 30.*—No. 530. Vertical tubular boiler in machine shop, No. 211 Twelfth street NW., owned by McKenzie & Jenks. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 30, 1896.

*May 30.*—No. 531. Vertical tubular boiler in carriage factory, No. 310 Pennsylvania avenue NW., owned by the McDermott Carriage Company. Hydrostatic pressure, 95 pounds; working pressure allowed, 60 pounds to square inch. Expires May 30, 1896.

*May 30.*—No. 532. Horizontal tubular boiler in iron foundry, Twelfth street and Ohio avenue NW., owned by C. A. Schneider's Sons. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires May 30, 1896.

*May 30.*—No. 533. Horizontal tubular boiler, brass foundry, No. 322 Thirteenth street NW., owned by Thomas Somerville & Sons. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 30, 1896.

*May 31.*—No. 534. Horizontal tubular boiler in the United States Government Printing Office. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires May 31, 1896.

*May 31.*—No. 535. Horizontal tubular boiler in stone works, First and M streets NE., owned by Lane & Malnati. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 31, 1896.

*May 31.*—No. 536 (64). Horizontal tubular boiler at Ninth street wharf SW., owned by the Independent Ice Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 31, 1896.

*June 1.*—No. 537. Horizontal tubular boiler at Ninth street wharf SW., owned by the Independent Ice Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires June 1, 1896.

*June 3.*—No. 538. Vertical tubular boiler in wood and coal yard, No. 15 Massachusetts avenue NE., owned by D. K. Hackman. Hydrostatic pressure, 120 pounds; working pressure allowed, 70 pounds to square inch. Expires June 3, 1896.

*June 3.*—No. 539. New vertical tubular boiler in steam bakery, No. 1819 Seventh street NW., owned by M. Holzbeirlein. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires June 3, 1896.

*June 3.*—No. 540. Vertical tubular boiler in machine shop, Sixth and O streets SW., owned by Charles White & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 3, 1896.

*June 3.*—No. 541. Vertical tubular boiler in plant, lot 13, Chinchister, sub-Anacostia, D. C., owned by B. Bryan. Hydrostatic pressure, 125 pounds; working pressure allowed, 80 pounds to square inch. Expires June 3, 1896.

*June 4.*—No. 542. Locomotive foundry boiler in Hotel Gerst, corner Four-and-a-half and I streets SW., Gregor Gerst, proprietor. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 4, 1896.

*June 4.*—No. 543. National water-tube boiler in The Raleigh. Hydrostatic pressure, 145 pounds; working pressure allowed, 95 pounds to square inch. Expires June 4, 1896.

*June 6.*—No. 544. Vertical tubular boiler at Littlefield's wharf, used for hoisting purposes, owned by Littlefield, Alvord & Co. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 6, 1896.



*June 6.*—No. 545. Horizontal tubular boiler in power house at Eckington, D. C., owned by the Eckington and Soldiers' Home Railway Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 6, 1896.

*June 6.*—No. 546. Horizontal tubular boiler in money-order office, Eighth and E streets NW. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 6, 1896.

*June 7.*—No. 547. Vertical tubular boiler in slaughterhouse, Half and R streets SW., owned by Fred Dietz. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 7, 1896.

*June 7.*—No. 548. Horizontal tubular boiler in The Portland, Vermont avenue and Fourteenth street NW., Edward L. Weston, manager. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Condemned for repairs; repaired and passed. Expires June 7, 1896.

*June 8.*—No. 549. Locomotive foundry boiler in brickyard, Half street SW., owned by T. Martin & Bro. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Condemned for repairs; repaired and passed. Expires June 8, 1896.

*June 8.*—No. 550. Vertical tubular boiler in plant, No. 922 Louisiana avenue NW., owned by Hillman & Co. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 8, 1896.

*June 10.*—No. 551. Vertical tubular boiler in the Cochran, Fourteenth and K streets NW., John C. Mulford, proprietor. Hydrostatic pressure, 145 pounds; working pressure allowed, 80 pounds to square inch. Expires June 10, 1896.

*June 10.*—No. 552. Economic boiler in brickyard, South Capitol and O streets SE., owned by the Alfred Richards Brick Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 10, 1896.

*June 10.*—No. 553. Economic boiler in brickyard, South Capitol and O streets SE., owned by the Alfred Richards Brick Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 10, 1896.

*June 10.*—No. 554. Babcock & Wilcox boiler in The Shoreham. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 10, 1896.

*June 11.*—No. 555. Vertical tubular boiler in Gerhard Lang's Bottling Works, No. 359 M street SW., Phil Hellriegel, manager. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 11, 1896.

*June 11.*—No. 556 (67). Locomotive boiler in roundhouse, South Capitol and I streets SE., owned by the Philadelphia, Wilmington and Baltimore Railroad Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 110 pounds to square inch. Expires June 11, 1896.

*June 11.*—No. 557 (81). Locomotive boiler in roundhouse, South Capitol and I streets SE. Hydrostatic pressure, 160 pounds; working pressure allowed, 110 pounds to square inch. Expires June 11, 1896.

*June 11.*—No. 558. Locomotive-form boiler in the Arno, Sixteenth and I streets NW., William E. Prall, proprietor. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 11, 1896.

*June 12.*—No. 559. Vertical tubular boiler in bottling works, Tenth and I streets SE., owned by J. F. Herrmann & Son. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 12, 1896.

*June 12.*—Nos. 560 and 561. Horizontal tubular boilers in works, South Capitol and R streets SE., owned by the Washington Asphalt Block and Tile Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds each to square inch. Expire June 12, 1896.

*June 12.*—No. 562. Vertical cast-iron boiler in No. 231 Seventh street SW., owned by William S. Sammon. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 12, 1896.

*June 12.*—No. 563. Vertical tubular boiler in money order office, Eighth and E streets NW. Hydrostatic pressure, 130 pounds; working pressure allowed, 60 pounds to square inch. Expires June 12, 1896.

*June 13.*—No. 564. Babcock & Wilcox Company boiler in power house, Eckington, owned by the Eckington and Soldiers' Home Railway Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 13, 1896.

*June 13.*—Nos. 565 and 566. Horizontal tubular boilers in Grand Army Building, Nos. 1412-1414 Pennsylvania avenue NW., owned by G. G. Cornwell & Son. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds each to square inch. Expire June 13, 1896.

*June 14.*—No. 567. Vertical tubular boiler used for hoisting purposes, owned by the Christian Heinrich Brewing Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 14, 1896.



June 14.—No. 568. Vertical tubular boiler in works in rear of I street, between Twenty-first and Twenty-second streets NW., owned by Duckett & Wright. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires June 14, 1896.

June 14.—No. 569. Vertical tubular boiler used for hoisting purposes at Heinrich's new brewery, owned by R. D. McClure. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 14, 1896.

June 15.—No. 570. Horizontal tubular boiler in Small Building, Fourteenth and G streets NW., owned by J. H. Small & Sons. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds (if necessary 70 pounds) to square inch. Expires June 15, 1896.

June 17.—No. 571. Vertical tubular boiler at Littlefield's Wharf, used for hoisting purposes, owned by Littlefield, Alvord & Co. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Condemned for repairs; repaired and passed. Expires June 17, 1896.

June 17.—No. 572. Babcock & Wilcox Company boiler in The Shoreham. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 17, 1896.

June 17.—No. 573. Horizontal tubular boiler in small building, Fourteenth and G streets NW. Hydrostatic pressure, 110 pounds; working pressure allowed, 60 pounds (if necessary 70 pounds) to square inch. Expires June 17, 1896.

June 17.—No. 574. Horizontal tubular boiler in steam laundry, Nos. 491 to 499 C street NW., owned by James P. and Edward M. Tolman. Hydrostatic pressure, 115 pounds; working pressure allowed, 70 pounds to square inch. Expires June 17, 1896.

June 18.—No. 575. Horizontal tubular boiler in brickyard, Florida avenue NE., owned by the Washington Brick Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires June 18, 1896.

June 18.—No. 576. Vertical tubular boiler in Boston Steam Laundry, First and G streets NW., J. K. Korff, proprietor. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 18, 1896.

June 18.—No. 577. Vertical tubular boiler on schooner *John W. Linnell*, of Boston, Mass., Capt. S. N. Handy. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Condemned for repairs; repaired and passed. Expires June 18, 1896.

June 19.—No. 578. Vertical tubular boiler in steam bakery, No. 1339 H street NE., owned by J. J. Bischof. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 19, 1896.

June 19.—No. 579. Vertical tubular boiler in Mount Olivet Cemetery. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 19, 1896.

June 20.—No. 580. Locomotive-form boiler in wood and coal yard, I street, between Twenty-first and Twenty-second streets NW., owned by J. Maury Dove. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds to square inch. Expires June 20, 1896.

June 20.—No. 581. Horizontal tubular boiler in building southwest corner Ninth and F streets NW., owned by the Washington Loan and Trust Company. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires June 20, 1896.

June 21.—No. 582. Vertical tubular boiler used for hoisting purposes, owned by Frank N. Carver. Hydrostatic pressure, 160 pounds; working pressure allowed, 100 pounds to square inch. Expires June 21, 1896.

June 21.—Nos. 583 and 584. Horizontal tubular boilers in The Portland, Vermont avenue and Fourteenth street NW., Edward L. Weston, manager. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds each to square inch. Expires June 21, 1896.

June 21.—No. 585. Scotch return tubular boiler in works, Twenty-sixth and D streets NW., owned by the Barber Asphalt Paving Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 21, 1896.

June 21.—No. 586. Vertical tubular boiler at Eighth street wharf SW., owned by the National Capital Ice Company. Hydrostatic pressure, 145 pounds; working pressure allowed, 90 pounds to square inch. Expires June 21, 1896.

June 24.—No. 587. Vertical tubular boiler on steam roller *Dexter*, owned by the Cranford Paving Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 105 pounds to square inch. Expires June 24, 1896.

June 24.—No. 588. Return tubular boiler in wood and coal yard, Tenth street wharf SW., owned by Carter & Clarke. Hydrostatic pressure, 110 pounds; working pressure allowed, 70 pounds to square inch. Expires June 24, 1896.

June 24.—No. 589. Vertical tubular boiler in store, Seventh, between B and C streets SW., owned by Nixon Brewer. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 24, 1896.

*June 24.*—No. 590. Vertical tubular boiler in Glenwood Cemetery. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 24, 1896.

*June 25.*—No. 591. Economic boiler in Palace Steam Laundry, No. 113 Four-and-a-half street SW., owned by W. F. Barker and E. Shephardson. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 25, 1896.

*June 25.*—No. 592. Vertical tubular boiler on lighter *Potomac*, owned by Littlefield, Alvord & Co. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 25, 1896.

*June 25.*—No. 593. Locomotive boiler in roundhouse, Trinidad, D. C., owned by the Baltimore and Ohio Railroad Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 110 pounds to square inch. Expires June 25, 1896.

*June 26.*—No. 594. Vertical tubular boiler at sand wharf in works No. 2632 D street NW., used for hoisting purposes, owned by the Cranford Paving Company. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 26, 1896.

*June 26.*—No. 595. Horizontal tubular boiler in No. 921 Pennsylvania avenue NW., owned by the Adams Express Company. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Condemned for repairs; repaired and passed. Expires June 26, 1896.

*June 26.*—No. 596. Horizontal tubular boiler in terra-cotta works (county, District of Columbia), owned by A. Lamond; tested by hammer test; working pressure allowed, 110 pounds to square inch. Expires June 26, 1896.

*June 26.*—No. 597. Vertical tubular boiler in works No. 2632 D street NW., used for pumping purposes, owned by the Cranford Paving Company. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Condemned for repairs; repaired and passed. Expires June 26, 1896.

*June 27.*—No. 598. Horizontal tubular boiler in shop at Littlefield's wharf, owned by Littlefield, Alvord & Co. Hydrostatic pressure, 130 pounds; working pressure allowed, 70 pounds (if necessary 80 pounds) to square inch. Expires June 27, 1896.

*June 27.*—No. 599. Vertical tubular boiler in wood and coal yard No. 12 H street NE., owned by Frank Lillie. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires June 27, 1896.

*June 27.*—No. 600. Horizontal tubular boiler in brickyard, Florida avenue NE., owned by the Washington Brick Company. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 27, 1896.

*June 27.*—No. 601. Locomotive boiler in roundhouse, Trinidad, D. C., owned by the Baltimore and Ohio Railroad Company. Hydrostatic pressure, 160 pounds; working pressure allowed, 110 pounds to square inch. Expires June 27, 1896.

*June 28.*—No. 602. Vertical tubular boiler in The Hotel Page, No. 721-727 Fifteenth street NW., T. L. Page, proprietor. Hydrostatic pressure, 150 pounds; working pressure allowed, 100 pounds to square inch. Expires June 28, 1896.

*June 28.*—No. 603. Vertical tubular boiler in wood and coal yard, Virginia avenue and First street SW., owned by W. A. Eliason. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 28, 1896.

*June 29.*—No. 604. Horizontal tubular boiler in building No. 921 Pennsylvania avenue NW., owned by Adams Express Company. Hydrostatic pressure, 90 pounds; working pressure allowed, 60 pounds to square inch. Expires June 29, 1896.

*June 29.*—No. 605. Vertical tubular boiler in steam bakery, No. 622 E street NW., owned by W. Berens & Sons. Hydrostatic pressure, 100 pounds; working pressure allowed, 60 pounds to square inch. Expires June 29, 1896.

#### BOILERS INSPECTED FOR THE DISTRICT OF COLUMBIA.

*November 23, 1894.*—No. 1. Vertical tubular boiler in Manual Training School, Nos. 624-626 O street NW. Hydrostatic pressure, 150 pounds; working pressure allowed, 80 pounds (if necessary 90 pounds) to square inch. Expires November 23, 1895.

*April 11, 1895.*—Nos. 2 and 3. New water-tube boilers in U street pumping station. Hydrostatic pressure, 225 pounds; working pressure allowed, 150 pounds each to square inch. Expire April 11, 1896.

*April 12, 1895.*—No. 4. Horizontal tubular boiler in U street pumping station. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires April 12, 1896.

*April 18, 1895.*—No. 5. Horizontal tubular boiler in U street pumping station. Hydrostatic pressure, 140 pounds; working pressure allowed, 90 pounds to square inch. Expires April 18, 1896.

*April 29, 1895.*—No. 6. Vertical tubular boiler in Industrial Home School, Thirty-second street extended. Hydrostatic pressure, 120 pounds; working pressure allowed, 80 pounds to square inch. Expires May 29, 1896.



## DIVISION OF WATER AND STREET LIGHTING.

*Supervision of water distribution, water rates, street lighting, conduits, and inspection of gas and meters.*

Capt. EDWARD BURR, <i>Corps of Engineers, United States Army, Assistant to Engineer Commissioner, in charge.</i>	
H. F. HAYDEN, <i>Superintendent, Water Department.</i>	W. C. ALLEN, <i>Superintendent of Lamps.</i>
JOHN J. BEALL, <i>Water Registrar and Chief Clerk, Water Department.</i>	S. CALVERT FORD, <i>Inspector of Gas and Meters.</i>

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### REPORT OF OFFICER IN CHARGE.

OFFICE OF THE ENGINEER COMMISSIONER,  
*Washington, D. C., August 30, 1895.*

MAJOR: I have the honor to submit the following report upon the operations of the division of water and street lighting for the fiscal year ended June 30, 1895. This division includes the supervision of water distribution, water rates, street lighting, and inspection of gas and meters.

### DISTRIBUTION BRANCH OF THE WATER DEPARTMENT.

The maintenance of an ample supply of water for the District of Columbia, for its public buildings and grounds, and for the use of its citizens, is a divided responsibility. The water supply was originally provided by the United States for the use of its public buildings and grounds, and is under the charge of its officers. The use of any water in excess of that requisite for its own needs was freely given by the United States to the citizens of the District. Necessary increases and improvements in the supply system have been made, in part at the expense of the United States and in part at the expense of the District. The system for distributing the water to the private consumer has been provided by the District of Columbia and, together with the collection of revenues for its maintenance and extension, is under the control of the Commissioners.

The supply of water available for the use of private consumers has at times been very inadequate to the demands made upon it. The last increase in the supply system was completed in 1890, when the 48-inch main was put in service. At that time the city was divided into separate areas of which the higher, including Capitol Hill and the northern portion of the city, was supplied by the 48-inch main, and it was thought that no additional facilities would be necessary for many years. The increasing demand for water, due to the rapid growth of the city, and particularly in the higher areas, has, however, been much greater than was anticipated and the consumption has in five years outgrown the supply system which in 1890 was considered ample for at least fifteen

years. Pressures taken on the lines of the large supply mains indicate a general lowering of the pressure in the mains from that existing in 1890, after the last increase of the water supply. These pressures, together with the pressures existing at the same points in 1890, are embodied in Tables I, II, III, and IV.

TABLE I.—Pressures on the line of the 30-inch main, the water in the reservoir standing at 146 feet above datum on February 27, 1890, at 145 feet above datum on June 27, 1890, and 144 feet above datum on August 8, 1895.

Location.	Elevation of locality.	February 27 1890.				June 27, 1890.				August 8, 1895.			
		Pressures.		Elevation of water above datum.		Pressures.		Elevation of water above datum.		Pressures.		Elevation of water above datum.	
		Feet.	Lbs.	Feet.	Feet.	Lbs.	Feet.	Feet.	Feet.	Lbs.	Feet.	Feet.	Feet.
K and Twenty-fourth streets		64.3	20	46.2	110.5	26½	61.2	125.5	22½	51.97			116.27
K and Twenty-second streets		65.7	19	44	109.7	27	62.3	128	22	50.82			116.52
K and Twenty-first streets <sup>1</sup>		57.3	25	57.7	115	32	73.9	131.2	27½	62.94			120.24
K and Twentieth streets		61.7	21	48.5	110.2	30	69.3	131	25	57.75			119.45
K and Eighteenth streets <sup>1</sup>		67.2	21	48.5	115.7	27½	63.5	130.7	22½	51.39			118.59
K street and Connecticut avenue <sup>1</sup>		57.8	25	57.7	115.5	31	71.6	129.4	25½	58.32			116.12
K and Seventeenth streets <sup>1</sup>		55.5	25	57.7	113.1	30	69.3	124.7	30½	70.45			125.95
K and Sixteenth streets		53.8	22	50.8	104.6	31	71.6	125.4	26	60.06			113.86
K street and Vermont avenue <sup>1</sup>		63.2	21	48.5	111.7	25½	58.8	122	22½	51.39			114.59
K and Fourteenth streets <sup>1</sup>		63.4	21	48.5	111.9	24½	56.6	120	21½	50.24			113.64
K and Thirteenth streets <sup>1</sup>		77.2	15	34.6	111.8	17½	40.4	117.6	14½	34.07			111.27
K and Twelfth streets <sup>1</sup>		74.1	15	34.6	108.7	18½	42.7	116.8	15½	35.80			109.90
K and Eleventh streets		67.8	13	30	97.8	20	46.2	114	17½	39.84			107.64
K and Tenth streets		66.2	15	34.6	100.8	22½	51.5	117.7	19½	44.46			110.66
K and Eighth streets		58.1	17	39.3	97.4	24	55.4	113.5	21½	49.66			107.76
Massachusetts avenue and Sixth street						28	64.6	121.3	25	57.75			114.45
Massachusetts avenue and Fifth street						28½	65.8	118.2	25½	58.90			111.30
Massachusetts avenue and Fourth street						30	69.3	118.5	26½	61.21			110.41
Massachusetts avenue and Second street						31½	72.8	114.7	28½	65.83			107.73

<sup>1</sup> The water was supplied on February 27, 1890, to the hydrants from the 36-inch main on L street. The observations June 27, 1890, were after the introduction of water into the 48-inch main and after the city had been divided into high and low service areas.

<sup>2</sup> On 48-inch main.

TABLE II.—Pressures on the line of the 36-inch main, the water in the reservoir standing at 146 feet above datum on February 27, 1890, at 145 feet above datum on June 27, 1890, and 144 feet above datum August 8, 1895.

Location.	Elevation of locality.	February 27, 1890.				June 27, 1890.				August 8, 1895.			
		Pressures.		Elevation of water above datum.		Pressures.		Elevation of water above datum.		Pressures.		Elevation of water above datum.	
		Feet.	Lbs.	Feet.	Feet.	Lbs.	Feet.	Feet.	Feet.	Lbs.	Feet.	Feet.	Feet.
L and Twenty-fourth streets		65.8	24	55.4	120.2	28	64.6	130.4	30½	70.45			136.25
L and Nineteenth streets		51.7	26	60	111.7	32½	75	126.7	28	64.68			118.38
L and Eighteenth streets		55.4	26	60	112.4	32	73.9	129.3	28½	61.21			116.61
L and Seventh streets		72.9	17	39.2	112.1	23½	54.2	127.1	20½	46.77			113.67
L and Fifth streets		62.9	20	46.1	109	31	71.6	134.5	24½	56.59			119.49
L street and New Jersey avenue		49.8	26	60	109	30½	70.4	120.2	27½	62.94			112.74

NOTE.—The pressures of February 27, 1890, were before the introduction of water into the 48-inch main. The pressures of June 27, 1890, were after its introduction and after the division of the city into high and low service areas.

<sup>1</sup> On 48-inch main.

TABLE III.—Pressures on the line of the 48-inch main, the water in the reservoir standing at 145 feet above datum on June 27, 1890, and 144 feet above datum on August 8, 1895.

Location.	Elevation of locality.	June 27, 1890.				August 8, 1895.			
		Pressures.		Elevation of water above datum.		Pressures.		Elevation of water above datum.	
		Feet.	Lbs.	Feet.	Feet.	Lbs.	Feet.	Feet.	Feet.
R and Fourth streets.....	76	27	62.3	138.3	23	53.13	129.13		
R street and New Jersey avenue.....	77	27	62.3	139.3	22½	51.97	128.97		
R and Fifth streets.....	75.7	27½	63.5	139.2	23	53.13	128.83		
R and Seventh streets.....	79.2	26½	61.2	140.4	22	50.82	130.02		
R and Eighth streets.....	79.3	26	60	139.3	22	50.82	130.12		
R and Ninth streets.....	79.4	25½	58.8	138.2	21	48.51	127.91		
R, Ninth, and Tenth streets.....	81	25½	58.8	139.8	21	48.51	129.51		
R and Tenth streets.....	82.6	25	57.7	140.3	20	46.20	128.80		
R and Eleventh streets.....	86.6	23½	54.2	140.8	19	43.89	130.49		
R street and Vermont avenue.....	90.2	22	50.8	141	18	41.58	131.78		
R and Thirteenth streets.....	96.2	18½	42.7	138.9	14½	32.92	129.12		
R and Fourteenth streets.....	102	16½	38.1	140.1	12	27.72	129.72		
R and Fifteenth streets.....	91.7	21	48.5	140.2	17	39.27	130.97		
R and Sixteenth streets.....	88.1	23	53.1	141.2	19	43.89	131.99		
R and Seventeenth streets.....	86.5	25	57.7	144.2	21½	49.66	136.16		
New Hampshire avenue and Q street.....	86.4	23½	54.2	140.6	19½	45.62	132.02		
New Hampshire avenue and Dupont Circle.....	88.4	23	53.1	141.5	19	43.89	132.29		
New Hampshire avenue and N street.....	76.3	28	64.6	140.9	24½	57.17	133.47		
New Hampshire avenue and M street.....	60.2	36	83.1	143.3	32½	75.55	135.85		
M and Twenty-second streets.....	58.9	35	80.8	139.7	32½	75.07	133.97		
M and Twenty-third streets.....	61.4	33½	77.3	138.7	31½	72.76	134.16		
M and Twenty-fourth streets.....	63.7	33	76.2	139.9	31	71.61	135.31		
M and Thirty-second streets.....	69.1	31½	72.8	141.9	23	53.13	122.23		
M and Thirty-fourth streets.....	76.5	28½	65.8	142.3	21	48.51	126.01		

¹ Pressures must have been taken at fire hydrants instead of at 48-inch main.

TABLE IV.—Pressures on East Capitol street before and after the introduction of water into the 48-inch main.

Location.	Elevation of locality.	Before the introduction of water into the 48-inch main, the water in the distributing reservoir standing at 146 feet above datum.				At the end of the fiscal year ended June 30, 1890, the water in the distributing reservoir standing at 145 feet above datum.				August 8, 1895, the water in the distributing reservoir standing at 144 feet above datum.			
		Pressures.		Elevation of water above datum.		Pressures.		Elevation of water above datum.		Pressures.		Elevation of water above datum.	
		Feet.	Lbs.	Feet.	Feet.	Lbs.	Feet.	Feet.	Feet.	Lbs.	Feet.	Feet.	Feet.
East Capitol and Second streets.....	93	4	9.2	102.2	15	24.6	127.6	14	32.34	125.34			
East Capitol and Third streets.....	94	3½	8.1	102.1	15½	35.8	129.8	14	32.34	126.34			
East Capitol and Fifth streets.....	88.5	6	13.9	102.4	16½	38.1	126.6	16	36.96	125.46			
East Capitol and Sixth streets.....	86.2	6½	15	101.2	17½	40.4	126.6	17	39.27	125.47			
East Capitol and Seventh streets.....	81.4	8	18.5	99.9	20	46.2	127.6	19½	44.46	125.86			
East Capitol and Ninth streets.....	83.8	8½	19.7	103.5	20	46.2	130	18½	43.31	127.11			
East Capitol and Eleventh streets.....	86	6½	15	101	18½	42.7	128.7	17½	39.84	125.84			

An examination of the tables shows that, while the pressure is fairly well maintained on Capitol Hill, there is a marked falling off in all other localities, and at some points the conditions are very little better than 1890. It is to be remembered that these pressures are taken in the nearest proximity to the large mains and represent the conditions in the most favored localities. At points off the large mains the deficiency in pressure is still greater. It should also be noted that these pressures were taken at a time when the draft on the mains was probably no greater than normal, and when few or no complaints of insufficient supply were making. When the draft on the mains is greatest,



as in very cold weather, the pressures are greatly reduced from those shown in the tables. During the past winter complaints were very numerous, and came from all parts of the city, including Capitol Hill, where the supply, under normal condition, is ample. Where the deficiency in water supply is confined to a single locality, relief may be had by resorting to temporary expedients, but a general deficiency can only be improved by an increase in the general supply. It will be noticed from the tables of pressures that, while the pressures in the large mains have fallen off 10 or 11 feet, the water in the distributing reservoir was maintained at practically the same level in 1895 as in 1890, the difference in level being only 1 foot, and this difference being due largely to causes outside of the draft of the city mains. There is undoubtedly urgent necessity for increasing the means for supplying the reservoirs, but there is an equal or greater urgency for immediately increasing the facilities for bringing water from the distributing reservoir to the city. With an unlimited supply in the reservoir, the consumers can expect no increase in the amount of water furnished them until the tunnel conduit or a substitute therefor is completed. Much inconvenience, distress, and danger are now continually experienced from the present inadequate supply of water, and with prompt action no relief can be had for at least two years. It can not, then, be too urgently recommended that steps be immediately taken for increasing the facilities for bringing water from the distributing reservoir to the city.

The total length of water mains laid during the year is 142,902 feet, the largest year's work ever done in the water department. Of this amount 28,903 feet of 6-inch mains were laid in accommodating the system of distributing mains to the underground traction systems of the Columbia Railway Company and Metropolitan Railway Company. Ninety-seven thousand three hundred and ten feet of water mains were laid in the low-service area, and 45,592 feet of mains in the middle and upper high-service areas. The following tables summarize the extent of the distribution system on June 30, 1895, and the operations of the distribution branch of the water department during the fiscal year just closed:

TABLE V.—*Mains laid during year, and miscellaneous work.*

New mains laid.	Feet.	New mains laid.	Feet.
24 inches diameter .....	6,616 $\frac{1}{2}$	3 inches diameter .....	2,733
12 inches diameter .....	27,730 $\frac{3}{4}$	Connections for fire hydrants .....	3,405 $\frac{1}{2}$
6 inches diameter .....	99,940 $\frac{1}{2}$	Intersections laid .....	439
4 inches diameter .....	5,442	Mains lowered .....	2,372
Valve casings changed to grade .....	35	New hydrants to replace old ones .....	14
Valves repaired .....	92	Hydrants moved to new curb .....	2
Fire hydrants erected .....	190	Hydrants repaired .....	742
Fire hydrants moved .....	4	New drinking fountains erected .....	5
Fire hydrants moved to new curb .....	3	Drinking fountains repaired .....	125
Fire hydrants repaired .....	781	Services laid to curb .....	222
Taps made .....	1,513	Service pipes lowered (number) .....	84
New hydrants erected .....	27	Service boxes and street washers adjusted to new grade .....	92
Hydrants removed and abandoned .....	18		

TABLE VI.—Summary statement of distribution system.

	In service prior to June 30, 1894.	Added during the fiscal year.	Total June 30, 1895.
	<i>Linear feet.</i>	<i>Linear feet.</i>	<i>Linear feet.</i>
75 inches diameter.....	662		662
48 inches diameter.....	29,736		29,736
36 inches diameter.....	23,245		23,245
30 inches diameter.....	36,719		36,719
24 inches diameter.....	14,659	6,616 <sup>1</sup>	21,275 <sup>1</sup>
20 inches diameter.....	23,533		23,533
16 inches diameter.....	2,560		2,560
12 inches diameter.....	134,047	27,730 <sup>2</sup>	161,777 <sup>2</sup>
10 inches diameter.....	12,141		12,141
8 inches diameter.....	5,925		5,925
6 inches diameter.....	1,029,670	2100,379 <sup>3</sup>	3,130,049 <sup>3</sup>
4 inches diameter.....	47,010 <sup>4</sup>	25,442	52,461 <sup>4</sup>
3 inches diameter.....	47,968	22,733	50,701
6 and 4 inch mains to fire hydrants	28,218 <sup>5</sup>	3,405 <sup>5</sup>	31,624 <sup>5</sup>
4 inches diameter and smaller.....	108,030		108,030
Total.....	1,544,073 <sup>1</sup>	146,308	1,690,381 <sup>1</sup>
	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
Stop valves.....	2,632	399	2,731
Fire hydrants.....	1,498	190	1,688
Street hydrants.....	311	27	320
Service connections.....	42,309	1,345	43,654
Taps.....	54,734	1,513	56,247
Public pumps.....	216	2	171
Horse fountains.....	62	5	67

<sup>1</sup> 972 feet abandoned on Sixteenth street on account of laying new 12-inch main.<sup>2</sup> Including 307 feet 3-inch, 229<sup>1</sup>/<sub>2</sub> feet 4-inch, and 14,253<sup>1</sup>/<sub>2</sub> feet 6-inch, mains laid under permit system.<sup>3</sup> 10,963 feet abandoned on account of laying new mains for Columbia and Metropolitan railway companies.<sup>4</sup> 18 street hydrants have been abandoned.<sup>5</sup> 47 wells have been filled and abandoned.

TABLE VII.—Statement showing costs of water mains laid during the fiscal year 1894-95.

Street.	Streets between—	Size.	Length.	Cost of material.	Cost of labor.	Total cost.
		<i>Inches.</i>	<i>Lin. ft.</i>			
In alley.....	Twenty-fourth and Twenty-fifth, M and N NW.	3	226	\$55.48	\$80.66	\$136.14
North side B.....	First and Second SW.....	3	241	62.69	110.05	172.74
In alley.....	Four-and-a-half and Sixth, H and I SW.	3	180	49.61	83.26	132.87
Do.....	Eighth and Ninth, B and C NE.	3	135	79.11	171.83	250.94
Do.....	Thirty-first and Thirty-second, M and N NW.	3	192	58.92	72.95	131.87
Do.....	Twenty-second and Twenty-third, M and N NW.	3	318	67.71	111.48	179.19
Do.....	Eighth and Ninth, B and C NE.	3	145	48.01	64.65	112.66
Do.....	Second and Third, C and D SW.	3	169 <sup>1</sup> / <sub>2</sub>	64.73	83.45	148.18
Do.....	Seventeenth and Eighteenth, P and Massachusetts avenue NW.	3	194	53.61	69.18	122.69
Do.....	Third and Fourth, G and H NE.	3	148	41.73	56.86	98.59
Do.....	New Jersey avenue and Fifth, P and Franklin NW.	3	114	35.89	33.04	68.93
Do.....	Third and Fourth, G and H NE.	3	207	58.15	71.73	129.88
Do.....	Twenty-fifth and Twenty-sixth, I and K NW.	3	85	19.33	27.64	46.97
Do.....	Sixth and Seventh, N and O NW.	4	460	129.08	199.04	328.12
Do.....	Twelfth and Thirteenth, B and C SW.	4	380 <sup>1</sup> / <sub>2</sub>	139.34	227.23	366.57
East side Liberty.....	Florida avenue and W NW.	4	183	63.78	69.82	133.60
In alley.....	Fourteenth and Fifteenth, G and Pennsylvania avenue SE.	4	319	76.27	94.93	171.20

TABLE VII.—Statement showing costs of water mains laid, etc.—Continued.

Street.	Streets between—	Size.	Length.	Cost of material.	Cost of labor.	Total cost.
		Inches.	Lin. ft.			
In alley.....	Eighteenth and Nineteenth, L and M NW.	4	671	\$145.71	\$184.18	\$329.89
Do.....	Twelfth and Thirteenth, C and D NE.	4	281	70.24	57.35	127.59
Do.....	Sixth and Seventh, G and H NE.	4	382	99.17	130.50	229.67
South side K.....	Sixth and Seventh SE.....	4	330	84.77	116.94	201.71
West side Fourth.....	B and Pennsylvania avenue SE.	4	317½	86.91	127.15	214.06
South side I.....	Third and Fourth NE.....	4	403	117.96	120.06	238.02
In alley.....	First and Second, B and Pennsylvania avenue NW.	4	328	105.56	140.47	246.03
East and west sides Thirty-fourth.	Q and R NW.....	4	771	156.47	283.37	439.84
North side B.....	Sixth and Seventh NW.....	4	231	66.22	112.80	179.02
Center Hanover.....	North Capitol and First NW	6	376	139.39	99.25	238.64
West side Delaware avenue	D and E SW.....	6	325	127.85	117.96	245.81
East side Fourteenth.	F and G NE.....	6	505	168.59	100.92	269.51
Center O.....	Twelfth and Thirteenth NE.	6	881	275.49	236.30	511.79
Center Sixth.....	I and K NE.....	6	310	104.36	70.75	175.11
Center Q.....	Eleventh and Twelfth NE.	6	235	72.19	91.32	163.51
Center Seventeenth.	Bennings road and Gales NE.					
Center Nineteenth.....	do.....	6	1,516½	633.84	434.42	1,068.26
Center Gales.....	Sixteenth and Seventeenth NE.					
Center School.....	Park and Grant, Mount Pleasant.	6	548	207.68	166.80	374.48
Center and east side Fourth.	R and T NE.....	6	1,112	491.09	656.15	1,150.24
Center Harrison.....	Fendall and Avalon, Uniontown.	6	804	308.09	327.87	635.96
Center Farragut.....	Brightwood and Sherman avenues NW.	6	838			
East side Fifth.....	E and F NE.....	12	80	348.33	232.54	580.87
North and south sides L	Twentieth and Twenty-first NW.	6	434	143.33	115.11	258.44
Center Second.....	G and I SE.....	6	741½	314.37	361.59	675.96
Center I.....	Second and Third.....					
East side Sixteenth.	T and Pi-ree Place NW.....	6	445½	183.32	174.51	357.83
South side Virginia ave.	Tenth and Eleventh SW.....	6	220	74.88	113.56	188.44
West side Eighteenth.	T and Florida avenue NW.	6	304	146.77	118.50	265.27
Center C.....	Fourteenth and Fifteenth NW.	6	430½	174.76	194.25	369.01
Do.....	do.....	6	392	137.11	128.57	265.68
Center Park.....	Twelfth and Thirteenth NE.	6	552	169.93	165.81	335.74
South side N.....	Sixteenth and Seventeenth, Mount Pleasant.	6	324½	103.85	119.28	223.13
East side Twenty-third	Twenty-second and Twenty-third NW.					
Center Eleventh.....	M and N NW.....	6	388	127.19	119.70	246.89
Center Sixth, extended	I and K NE.....	6	464	157.43	131.51	288.94
South side F.....	Lincoln and Howard NW.	6	221	67.80	76.84	144.64
Center Oak.....	Twelfth and Thirteenth NE.	6	476	159.14	158.83	317.97
Center Thirty-first	Harewood avenue and boundary, Le Droit Park.	6	96	32.10	43.92	76.02
Center Fifteenth.....	K and South NW.....	6	320	108.85	325.04	433.89
South side Pennsylvania avenue.	G and Pennsylvania avenue SE.					
Center Fourth.....	Fourteenth and Fifteenth SE.	6	1,203½	438.23	343.67	781.90
North side F.....	F and G NE.....	6	570½	180.03	175.44	355.47
East side Sixth.....	Third and Fourth NE.....	6	454½	169.39	121.16	292.55
East side Thirteenth.	C and North Carolina avenue SE.	6	155½	78.97	85.72	164.69
Center D.....	D and E NE. (part of main).	3	73	24.92	19.65	44.57
Center Holmead.....	Eleventh and Kentucky avenue SE.	6	1,672½	582.71	619.45	1,202.16
West side Second.....	Whitney avenue and Lamar, Mount Pleasant.	6	1,270½	468.77	377.28	846.05
Center Willard.....	L and M SE.....	6	336½	120.49	130.67	251.16
Center Queen.....	M and N SW.....	6	646	200.55	193.86	394.41
East side Brightwood avenue.	Seventeenth and Eighteenth NW.	6	938	332.27	259.57	591.84
Center Providence.....	Baltimore and Ohio right of way and Thirteenth, Brookland.	6	1,593½	571.10	460.91	1,032.01
Center Queen.....	Lansing and Providence, Brookland.	6	359	114.59	118.59	233.18
East side Brightwood avenue.	Rock Creek Church road and Newark.	6	430	163.82	146.09	309.91

TABLE VII.—Statement showing costs of water mains laid, etc.—Continued.

Street.	Streets between—	Size.	Length.	Cost of material.	Cost of labor.	Total cost.
		Inches.	Lin. ft.			
Center Fort.....	Tenth and Bunker Hill road, Brookland.	6	791½	\$292.84	\$215.85	\$508.69
Center Bunker Hill road.	Fort and Catholic University grounds, Brookland.	6	295	98.09	78.76	176.85
Center Keokuk.....	Ninth and Tenth, Brookland.	6	457	202.74	208.00	410.74
Center Lansing.....	Tenth and Twelfth, Brookland.	6	428	161.32	109.88	271.20
Center Hartford.....	do	6	491	156.18	135.33	291.51
South side Scott.....	Brightwood avenue and Whitney Close.	6	469	175.83	170.72	346.55
Center Concord.....	Tenth and Twelfth, Brookland.	6	455	178.07	139.48	317.55
Center Joliet.....	do	6	455	178.07	139.48	317.55
Center Fourth.....	T and Central avenue NE.	6	8,176	2,933.19	2,156.16	5,089.35
Center Central avenue.	Fourth and Seventh NE.	6	8,176	2,933.19	2,156.16	5,089.35
Center Seventh.....	Central avenue and Hartford, Brookland.	6	8,176	2,933.19	2,156.16	5,089.35
Center Hartford.....	Seventh and Tenth, Brookland.	6	8,176	2,933.19	2,156.16	5,089.35
Center Fort.....	Tenth and Twelfth, Brookland.	6	8,176	2,933.19	2,156.16	5,089.35
Center Twelfth.....	Fort and Philadelphia, Brookland.	6	8,176	2,933.19	2,156.16	5,089.35
Center Philadelphia.....	Twelfth and Thirteenth, Brookland.	6	8,176	2,933.19	2,156.16	5,089.35
Center N.....	Sixth and Union SW.	6	242	80.66	124.36	205.02
North side Florida ave.	Connecticut Avenue Heights	6	242	80.66	124.36	205.02
West side Connecticut avenue.	do	6	1,594½	547.63	1,103.81	1,651.44
North side Bancroft Place.	do	6	1,594½	547.63	1,103.81	1,651.44
East and west sides Twelfth.	G and I SE.	6	1,354	432.25	376.34	808.59
Center Dover.....	Tenth and Thirteenth, Brookland.	6	1,164	426.22	306.23	732.45
Center Elliott.....	Conduit Road and Hurst Place, county.	6	524	189.33	202.59	391.92
East and west sides Eighteenth.	L and M NW.	6	545	168.98	195.14	364.12
Center Thirteenth.....	G and H NE.	6	423	150.35	180.67	331.02
South side Florida ave.	Eighth and Tenth NE.	6	47	150.35	180.67	331.02
Center Fifteenth.....	B and Massachusetts avenue SE.	6	714½	252.54	243.15	495.69
North side Massachusetts avenue.	Fifteenth and Sixteenth SE.	6	370	140.67	108.77	249.44
Center Shannon.....	South of Navy Place, Uniontown.	6	728½	240.79	167.57	408.36
Center Navy.....	Shannon and Monroe, Uniontown.	6	728½	240.79	167.57	408.36
West side South Capitol.	C and D SW.	6	319½	102.39	80.03	182.42
Center Valley.....	Pleasant and Chestnut, Uniontown.	6	457	143.86	135.68	279.54
Center Parker.....	Second and Third NE.	6	661	243.06	238.04	476.10
Center Third.....	Parker and K NE.	6	661	243.06	238.04	476.10
West side Sixth.....	I and K SW.	6	314½	107.80	177.56	285.36
Center Cedar.....	Eighteenth and Nineteenth NW.	6	441	152.51	106.32	258.83
South side P.....	Twenty-first and Twenty-second NW.	6	636	233.92	245.72	479.64
Center Fourteenth.....	Pennsylvania avenue and K SE.	6	682	271.05	201.33	472.38
Center Sherman avenue.	Steuben and 150 feet south of Harvard, county.	6	504	221.10	173.15	394.25
East side Second.....	L and M SE.	6	349	127.84	97.88	225.67
East side North Capitol.	Quincy and R NE.	6	133½	45.39	67.03	112.42
Center Kenesaw.....	Fourteenth and 178 feet east of Thirteenth, Mount Pleasant.	6	967	322.72	274.31	597.03
Center T.....	Thirty-fourth and Thirty-fifth NW.	6	385	155.43	123.40	278.83
West side Eighteenth.	Oregon and T NW.	6	238½	98.03	69.74	167.67
Center Huntington Place.	Fourth and University Place, Mount Pleasant.	6	498	167.24	141.73	308.97
West side Eighteenth.	Corcoran and R NW.	6	136½	50.70	58.06	108.76
East side Fourteenth.	B and C SE.	6	136½	50.70	58.06	108.76
Center C.....	Kentucky avenue and Fifteenth SE.	6	498½	367.85	245.67	613.52

TABLE VII.—Statement showing costs of water mains, etc.—Continued.

Street.	Streets between—	Size.	Length.	Cost of material.	Cost of labor.	Total cost.
		Inches.	Lin. ft.			
Center Hartford .....	Twelfth and Thirteenth, Brookland.	6	813	\$281.37	\$232.49	\$513.86
Center Fifteenth .....	E NE. and A SE .....	6	3,300	1,324.06	1,066.24	2,391.20
Center E .....	Tennessee avenue and Fifteenth NE.					
East and west sides Third.	E and F NE .....	6	730	236.19	404.97	641.16
Center Thirteenth .....	B and North Carolina avenue NE.	6	502½	160.45	187.39	347.84
North and south sides L	New Jersey avenue and Third NW.	6	431	109.00	227.97	396.97
North and south sides F	Second and Third NE .....	6	738	244.25	106.52	350.77
Center Jefferson .....	East of Taylor, Uniontown.	6	155	48.01	64.65	112.66
North side B .....	Ninth and Tenth NW .....	6	2,909½	1,140.49	1,223.50	2,363.99
North side B .....	Twelfth and Fifteenth NW					
East side Fifteenth .....	B and Ohio avenue NW	6	1,187½	584.60	735.39	1,319.99
East side Seventh .....	Maryland and Virginia avenues NW.					
Center C .....	147 feet east of Seventh SW	6	575	185.51	151.58	337.09
Center Ninth .....	Virginia avenue and D SW.					
Center C .....	167 feet east of Ninth SW ..	6	409	164.73	163.37	328.10
West side Fourteenth.	F and G NE .....					
North and south sides R.	Twenty-first and Florida avenue NW.	6				
Center Eighteenth .....	A and B SE .....	6	904	387.99	506.52	894.51
Center A .....	Seventeenth and Eighteenth SE.					
Center Columbia .....	Thirteenth and Fourteenth, Mount Pleasant.	6	281	87.01	101.33	188.34
North side C .....	Tenth and Eleventh NE .....	6	358½	150.32	170.58	320.90
South side U .....	New Hampshire avenue and Seventeenth NW.	6	276	9.05	122.33	213.38
South side U .....	Fourteenth and Fifteenth NW.	6	692	160.07	216.55	376.62
Center Tenth .....	M and N SE .....	6	676	280.94	204.10	485.04
Center Ninth (Queen) ..	Frankfort and Hartford, Brookland.	6	360	174.22	123.55	297.77
In alley .....	Sixteenth and Seventeenth, U and V NW.	6	179½	79.45	51.03	130.48
Center T .....	Le Droit and Rhode Island avenues NW	6	613½	232.31	62.42	294.73
Center Rhode Island avenue.	T and First NW .....					
Center Valley .....	Chestnut and High, Uniontown.	6	319	129.17	138.64	267.81
North side Maryland avenue.	Ninth and Tenth NE. (part of main).	6	78	41.29	43.10	84.39
East side Kentucky avenue.	A and B SE .....	6	495	159.28	177.28	336.56
West side Fourteenth ..	C and South Carolina avenue SE.	6	475	155.00	267.04	422.04
Center Twenty-seventh.	I and K NW. (part of main).	6	152	48.90	64.24	113.14
Center Linden .....	Spruce and Elm, Le Droit Park.	6	207½	122.32	163.17	285.49
Center Maple .....	Le Droit and Harewood avenues, Le Droit Park.					
East and west sides Ninth.	Pennsylvania avenue and Q NW.	6	14,650½	6,448.23	4,767.86	11,216.09
West side Florida avenue.	W and Grant avenue NW ..					
North and south sides L	Four-and-a-half and Sixth SW.	6	2,952½	1,052.30	655.56	1,707.86
Center Flint .....	Brightwood avenue and Ninth, Brightwood Park.					
Center Ninth .....	Flint and Des Moines, Brightwood Park.	6	1,461	1,132.77	574.65	1,707.42
Center Des Moines .....	Ninth and Fifth, Brightwood Park.					
North side Benning road.	Sixteenth and Nineteenth NE.	12				
Center Florida avenue.	New York and Delaware avenues NE.	12	637½	633.24	286.12	919.36
Center Florida avenue.	Thirteenth and Grant avenue NW.	6	12			
North side Grant avenue.	Florida and Brightwood avenues NW.	12	2,007½	1,861.61	1,059.46	2,921.07
Center Florida avenue.	North Capitol and Portner Place NE.	6	158½			
Center Tenth (Wallace).	Hartford and Fort, Brookland.	12	348	303.90	162.30	466.20
		6	6			
		12	2,516	2,193.05	904.87	3,097.92
		6	32			

TABLE VII.—Statement showing costs of water mains, etc.—Continued.

Street.	Streets between—	Size.	Length.	Cost of material.	Cost of labor.	Total cost.
		<i>Inches.</i>	<i>Lin. ft.</i>			
North side Benning road.	Fifteenth and Sixteenth NE.	12	525	\$439.53	\$229.74	\$669.27
Center Florida avenue.	First and Fourth NW	12	1,289	\$1,071.38	478.73	1,550.11
Center South		6	196			
Center Grant road.		3	25			
Center Chappel road.						
Center Broad Branch road.	Fort Reno reservoir and Brightwood.	12	18,906	16,660.02	10,983.02	27,643.04
Center Rock Creek Ford road.						
Center Military road.						
North side U	Pumping station and New Hampshire avenue, NW.					
East side New Hampshire avenue.	U and Florida avenue, NW.					
Center Florida avenue.	New Hampshire avenue and Thirteenth, NW.	24	6,616½	18,371.59	10,237.45	28,609.04
Center Thirteenth, extended.	Florida and Whitney avenues, NW.					
<i>Intersections and connections.</i>						
South side Massachusetts avenue.	East of Third NW	4	64	29.53	43.75	73.28
South side Massachusetts avenue.	East of Seventh NW	4	85	39.84	63.76	103.60
First and Seaton.						
First and T.						
First and Thomas.		6	321	123.71	70.69	194.40
First and U.						
First and V.						
First and W.						
Florida avenue and Linden.	Le Droit Park	6	22	\$120.74	94.28	215.02
		12	96			
Total				77,430.81	57,071.50	134,502.31
Cost of laying mains, intersections, and connections, including repairs to improved pavements.				77,430.81	57,071.50	134,502.31
Cost of erecting fire hydrants, including repairs to improved pavements.				8,748.53	2,604.06	11,352.59
Total cost for laying mains, intersections, and erecting fire hydrants.				86,179.34	59,675.56	145,854.90

TABLE VIII.—Statement of the length and cost of water mains laid from July 1, 1878, to June 30, 1895.

Fiscal year.	36-inch.	24-inch.	20-inch.	16-inch.	12-inch.	10-inch.	8-inch.	6-inch.	4-inch.	3-inch.	Total.	Cost.
	<i>Lin. feet.</i>	<i>Lin. feet.</i>	<i>Lin. feet.</i>	<i>Lin. feet.</i>	<i>Lin. feet.</i>	<i>Lin. feet.</i>	<i>Lin. feet.</i>	<i>Lin. feet.</i>	<i>Lin. feet.</i>	<i>Lin. feet.</i>	<i>Lin. fe t.</i>	
1878.	394				3,719			12,781	30		16,569	\$14,846.20
1879.					7,409			8,546	1,397		17,352	19,436.03
1880.								13,024			3,024	
1881.								3,709			3,709	3,110.70
1882.								1,920			1,920	1,626.43
1883.					1,625		26	4,084			5,7,5	8,073.70
1884.					1,038			8,972			10,010	10,492.51
1885.					963			27,766	358	485	29,572	25,865.35
1886.					1,938	791		35,192		6,623	41,544	40,025.10
1887.		4,835			1,121	2,998		230,041	292	7,124	46,414	56,151.00
1888.					734			9,123	9,148	3,937	22,939	17,026.63
1889.		2,312	5,140		5,026	2,784		36,742	6,571	8,753	67,928	70,342.16
1890.								434,737	42,856	2,855	40,448	19,113.54
1891.					5,201			556,893	8,142	11,013	76,249	49,702.05
1892.			2,926	2,500	610,163			788,709	7,342	1,286	108,266	71,733.04
1893.					6,473			54,173	8,836	3,458	72,941	56,339.89
1894.			278		39,386			86,632	12,824	2,918	142,017	126,599.55
1895.		6,616			27,702			103,785	5,442	2,733	146,368	134,562.31
Total.	394	8,923	13,179	2,500	113,129	6,573	26	606,831	51,246	51,186	856,636	733,614.27

<sup>1</sup> Laid on Road street, Georgetown, to replace old cement pipe.

<sup>2</sup> Cost of laying intersections not included herein.

\*1,074 feet laid to United States Library site; cost not included herein.

<sup>4</sup>12,366 feet laid under permit system; cost not included herein.

<sup>5</sup> 5,576 feet laid under permit system; cost not included herein.

<sup>6</sup> 26.574 feet laid under permit system; cost not included herein.

7730 feet laid under permit system; cost not included herein.

\*434 feet laid under permit system and 1,938 $\frac{1}{2}$  feet used for connections for fire hydrants; cost not included herein.

- 307 feet 3-inch, 229 $\frac{1}{2}$  feet 4-inch, and 14,253 $\frac{1}{2}$  feet 6-inch mains laid under permit system, and 3,405 $\frac{1}{2}$  feet used for connections to fire hydrants; cost not included herein.

For the work of this department the materials were in general obtained by contract and the mains were laid by hired labor.

The following table shows the average cost per linear foot of the mains laid during the year:

TABLE IX.—Average cost per foot for laying mains of different sizes.

Size.	Linear feet.	Cost of material.	Cost of labor.	Total cost.
3-inch.....	2, 426	\$0. 2562	\$0. 3563	\$0. 6125
4-inch.....	5, 063	. 2472	. 2880	. 5352
6-inch.....	85, 687	. 3650	. 3025	. 6675
12-inch.....	27, 730	. 8757	. 5276	1. 4033
24-inch.....	6, 616	2. 7724	1. 8316	4. 6040

The above table does not include the cost of relaying pavements. Brick and cobble pavements have been relaid by the water department, and other kinds by the surface department.

TABLE X.—Average cost per foot of relaying pavements.

Size.	Cobble.		Trap rock.		Brick.		Belgian.		Vitrified brick.		Asphalt blocks.		Sheet asphalt.	
	Lin-ear feet.	Cost.	Lin-ear feet.	Cost.	Lin-ear feet.	Cost.	Lin-ear feet.	Cost.	Lin-ear feet.	Cost.	Lin-ear feet.	Cost.	Lin-ear feet.	Cost.
3-inch.....	150	\$0.1744	.....	.....	196	\$0.1392	49	\$0.8203	95	\$0.5862	368	\$0.7382	.....	.....
4-inch.....	1,309	.1047	.....	.....	1,327	.0830	44	.6086	.....	.....	752	.3909	209	\$0.5587
6-inch.....	281	.1444	95	\$0.1512	6,865	.1277	1,440	.3412	10	.4200	.....	.3306	1,112	.4640
12-inch.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	105	.....	88	.2845



## HIGH SERVICE.

More than 90 per cent of the water furnished the District of Columbia is supplied by gravity to the low-service area. The distributing reservoir for this area has a water level of 146 feet above mean high water and gives a fair service, when the mains are not overtaxed, to localities as high as 100 feet above datum. Under conditions such as exist at present with the supply mains overtaxed, the service in all localities between 85 and 100 feet above datum is at times very inadequate. Much of Georgetown, a small portion of Washington, and the greater part of the remainder of the District of Columbia lie above the level of 100 feet above datum, and for these areas the supply of water has to be pumped. A considerable part of the northwest section of Washington lies between 85 and 100 feet above datum, and in this area under present conditions the water supply from the gravity system is precarious. At times it is inadequate on account of the overtaxing of the 48-inch main and the resulting loss of pressure. The high service system has, during the past year, been extended to include some small portions of this area, and with increased pumping and reservoir facilities it is expected to make further extensions in the future and until the general supply of water is increased.

On account of the great variation in the elevation of the different parts of the District of Columbia the high service system of water distribution has been divided into an upper and a middle high service. The upper high service is intended to supply those areas of the District which lie above the level of 210 feet above datum and the middle high service those areas between the levels of 100 and 210 feet above datum. The middle high service area covers much of Georgetown, a part of Washington, and the suburban districts between Rock Creek and the Soldiers' Home and to the eastward of the Soldiers' Home. Population and improvements are rapidly increasing in this area, with an increasing demand for water facilities.

The following table shows the average amount of water pumped daily for the middle high-service area during the fiscal year ending June 30, 1895:

TABLE XI.—Average daily consumption, middle high service.

Month.	Gallons.	Month.	Gallons.
July, 1894 .....	2,670,973	January, 1895 .....	3,772,300
August, 1894 .....	2,885,335	February, 1895 .....	3,744,418
September, 1894 .....	3,140,500	March, 1895 .....	3,069,329
October, 1894 .....	3,299,378	April, 1895 .....	3,375,131
November, 1894 .....	3,244,301	May, 1895 .....	3,432,571
December, 1894 .....	3,378,825	June, 1895 .....	3,747,570

Until recently two pumping stations have been maintained for supplying this area. The Georgetown station was closed in 1893, although held in readiness for emergencies, and the entire area is now supplied from the pumping station on U street between Sixteenth and Seventeenth streets NW. All pumping plant for the high service areas will be concentrated at this station and increased as the demand grows.

The act of March 3, 1893, and subsequent acts making appropriations for this department have appropriated, for extending the high-service system of water distribution, so much as may be available in the water fund after providing for the other expenditures authorized in the same acts. Under these appropriations much needed extensions and improvements in the high-service system have been commenced.



Additional ground was acquired at the station during the past year for storage purposes and future extensions. Plans have been prepared for a building to replace the old and cramped structures at the station. It is expected that this building will be completed in January, 1896.

The 5,000,000-gallon pumping engine contracted for with the Nordberg Manufacturing Company, and which was to have been completed in January 1895, has, after unavoidable delays, been completed, although not yet offered for test. This engine has been designed for use in the upper high service, but with the expectation of using it in the middle high service with as great or greater economy than the old engines. Additional pumping facilities will be shortly needed and it is expected that during the coming fiscal year a contract will be made for an 8,000,000-gallon pumping engine for the middle high service to replace one of the old 2,500,000-gallon engines.

The two 2,500,000-gallon engines at the U street station have been relied on to supply the middle high-service area since the discontinuance of the Georgetown station, and during a large part of the past year have been operated to their maximum capacity for a portion of every day. With insufficient pumping and reservoir capacity, it has been impossible to stop the engines excepting for a few hours at night in order to make minor repairs to the engines or changes in the water-main connections. These engines have not been thoroughly overhauled for two years and are much in need of repairs.

The only reservoir facilities on the middle high service system are furnished by a small reservoir at Thirty-second and U streets, Georgetown, the property of the United States and under the control of its officers. The capacity of this reservoir is much too small, and its elevation, 220.5 feet above datum, is insufficient to give a fair service to the higher points of this system. The most urgent needs of this system are increased reservoir facilities and larger force mains. A new reservoir should be located at some point on the high ground back of the central part of the city and at an elevation of about 260 feet above datum. Several sites are now under consideration, and it is hoped that the construction of a reservoir, with a capacity of not less than 15,000,000 gallons, will be commenced during the next fiscal year. During the past year 6,616 linear feet of 24-inch main were laid in making connection at the pumping station with the new 5,000,000-gallon engine and for a force main from the pumping station toward the proposed reservoir. This main was laid from Sixteenth and U streets to Thirteenth street and Whitney avenue, and will be extended to the reservoir as soon as a site therefor has been acquired.

The capacity of the force main for the middle high service from the U street pumping station to Georgetown, now in part 12-inch main and in part 10-inch main, is overtaxed. During the coming year a 20-inch main with two 12-inch extensions will be laid for the improvement of the service in the Georgetown high-service area. The 12-inch main for supplying Eckington and Brookland should be completed as early as practicable.

During the previous year a site for a reservoir for the upper high service was purchased at Fort Reno, 420 feet above datum. A 12-inch main was laid from the U street pumping station via Woodley lane and the Tennallytown road to the reservoir site and a small tank erected for service pending the construction of the reservoir. A small Knowles pump, having a capacity of about 100,000 gallons per diem, which was kindly loaned to the water department by the Architect of the Capitol, was put in operation in July, 1894, and since that time has been sup-



plying all the water necessary on the line of the main to Tennallytown and Reno. The average amount pumped for this service during the fiscal year was 47,253 gallons per d.em.

TABLE XII.—Average daily consumption, upper high service.

Month.	Gallons.	Month.	Gallons.
September, 1894 .....	38,923	February, 1895 .....	36,720
October, 1894 .....	48,814	March, 1895 .....	26,395
November, 1894 .....	54,793	April, 1895 .....	34,647
December, 1894 .....	57,090	May, 1895 .....	33,457
January, 1895 .....	36,398	June, 1895 .....	47,062

A 12-inch main for supplying Brightwood and Takoma has been laid from Reno. This main was completed at the end of the fiscal year, with the exception of the portion under Rock Creek, where a temporary connection was made for use until such time as low water will permit of laying the permanent main in the bed of the stream. Water was turned into this main early in July.

A contract for the excavation and embankment of the Reno reservoir was let in September, 1894, and completed in December. Early in the coming fiscal year a contract will be made for completing the reservoir, and it is expected that it will be available for use in December next. Until the reservoir is completed this service will continue to be served by the Knowles pump, and afterwards by the 5,000,000 gallon engine designed for this service. The area higher than 210 feet above datum and to be supplied by this upper high service now is, and for many years will continue to be, but thinly settled. The Reno reservoir, with a capacity of 4,500,000 gallons, and the new 5,000,000-gallon engine will meet all of its requirements for many years to come.

The following table summarizes the extent of the mains laid previous to June 30, 1895, from the appropriation for the high-service system and the mains laid in this service during the past year. These items are also included in Tables V, VI, VII, and VIII. Many mains now in the high-service system were laid previous to the making of a separate appropriation for this system, and are not included in the following table.

TABLE XIII.—Statement of the length and cost of water mains laid under the appropriation for extending the high-service system of water distribution, from July 1, 1893, to June 30, 1895.

Fiscal year.	24-inch.	20-inch.	12-inch.	6-inch.	4-inch.	Total.	Cost.
	<i>Lin. ft.</i>	<i>Lin. ft.</i>	<i>Lin. ft.</i>	<i>Lin. ft.</i>	<i>Lin. ft.</i>	<i>Lin. ft.</i>	
1893 .....			2,682	2,822		5,504	\$6,760.16
1894 .....		278	52,789	14,269		67,337	69,247.27
1895 .....	6,616		9,625	28,396	954	45,592	77,716.66
Total .....	6,616	278	65,096	45,484	954	118,433	153,724.09

## PUBLIC WELLS.

An appropriation is made annually for the care of the public wells in the District. There were 171 of these wells in use on June 30, 1895. During the year 47 wells were filled and abandoned and 2 new wells were driven. Excepting the two new wells, all the existing wells are shallow. In any metropolitan district such wells are liable to contamination from sewage and surface drainage and it may be confidently

asserted that sooner or later the water in all of them will become unfit for potable purposes. Continued efforts are being made to have the water from the public wells in the District frequently examined chemically, and upon the concurrent showing of two examinations by different chemists that the water in any well is so contaminated as to be unfit for use the well has been closed. These wells are frequently located in close proximity to sewers and in places that are otherwise unsanitary. Since sewers are rarely absolutely water-tight, all wells near them are surely liable to contamination with sewage at no distant time. As a matter of fact a large percentage of all the wells so far examined have been found to be polluted, and it is safe to assert that every shallow well in a densely populated metropolitan district is, or soon will be, a menace to the public health.

During the year two deep wells were driven for experimental purposes. One of these wells is located at Brightwood, on Brightwood avenue just south of the Military road, and the other at Sixth and G streets S.W. Both wells were driven to a depth of nearly 150 feet and were lined with 6-inch wrought-iron pipe, excepting where driven in rock. The Brightwood well was driven some distance into the rock, but the other well did not reach it. A supply of water was obtained in each well sufficient to meet the demands on it. The water from each well has been examined chemically and found to be of very good quality.

The desire of the people to have well water and their objections to the closing of shallow wells is readily comprehended. Well water is clear and cool when Potomac water is warm and at times turbid, and, excepting when vilely polluted, it is unobjectionable in taste and odor even when so contaminated as to be unfit for use. The majority of the existing public wells are located where they will be of service to the poorer classes, and, when the water is good, are undoubtedly of great benefit and comfort to the people who can not afford to cool their water with ice for drinking purposes. If contaminated and abandoned shallow wells can be replaced by deep wells furnishing pure water, a lasting benefit will be conferred on these classes.

The two experimental wells driven during the year indicate that good water can be had at a reasonable depth and cost, and it is recommended that the number of public wells of this class be increased. An item of \$10,000 for this purpose should be included in the estimates for 1897.

#### REVENUE BRANCH OF THE WATER DEPARTMENT.

The following statement shows the receipts and expenditures of the water department for the fiscal year ended June 30, 1895:

*Financial statement for fiscal year 1894-95.*

##### RECEIPTS.

Water tax—		
Current tax.....	\$65,014.15	
Advertised tax.....	4,294.38	
Total .....		\$69,308.53
Interest—		
On current tax.....	2,284.41	
On advertised tax.....	1,379.30	
Total .....		3,663.71
Water rent .....		251,872.71
Water taps for services.....		4,537.55
Water for building purposes, etc.....		2,100.60
Special assessment for laying water-service pipes, acts approved March 14, 1894, and August 7, 1894.....		1,063.97
Total .....		<u>332,547.07</u>



## EXPENDITURES.

Salaries.....	\$38,902.48
Contingent expenses.....	2,449.28
Refunds:	
Water rents.....	\$748.18
Water-main taxes.....	293.47
Total.....	1,041.65
Pumping expenses and pipe distribution.....	89,010.52
High service.....	106,812.38
Interest and sinking fund on account of increasing water supply.....	62,052.27
Interest and sinking fund on account of water stock bonds.....	44,610.00
Interest and sinking fund on account of Fourteenth street and 48-inch mains.....	20,003.70
Total interest and sinking fund.....	126,665.97
Interest and sinking fund on account of increasing water supply:	
Interest.....	13,868.71
Sinking fund.....	26,540.18
Total expenditures.....	424,882.28
Water tax levied during year.....	167,621.37
Water tax arrears, June 30, 1895—amount collectible.....	213,853.26
Total amount standing to credit of water fund, June 30, 1895.....	153,690.59

<sup>1</sup> Of this amount, \$1,921.06 was paid on account of 1893, and \$178.46 on account of 1894.

<sup>2</sup> Of this amount, \$251.57 was paid on account of 1894.

<sup>3</sup> Of this amount, \$9,764.51 was paid on account of 1894.

<sup>4</sup> This item of \$40,408.81 was not advanced to Treasurer United States until after close of fiscal year and is not included in expenditures.

## Comparative statement of revenues.

Fiscal year.	Water rents.	Water-main assessments.	Taps.	Permits, etc.	Total revenues.
1885.....	\$188,528.20	\$20,578.88	\$3,402.00	\$3,076.00	\$145,585.17
1886.....	124,896.22	36,162.04	5,096.00	3,459.03	169,612.29
1887.....	138,539.49	47,183.24	6,012.00	4,846.45	196,581.18
1888.....	171,892.49	34,204.85	4,182.00	4,809.92	215,149.26
1889.....	189,407.39	46,280.58	5,190.00	5,576.16	246,454.13
1890.....	197,053.34	45,386.55	5,313.72	6,327.95	254,081.56
1891.....	209,064.29	50,322.93	5,640.00	6,866.79	272,497.01
1892.....	220,892.93	68,807.35	5,790.00	6,280.81	301,771.09
1893.....	225,911.25	70,026.33	7,307.09	7,931.71	321,176.38
1894.....	245,890.69	86,975.44	4,497.00	1,168.79	338,540.92
1895.....	251,872.71	72,972.24	4,537.55	2,100.60	331,483.10
1896 (estimated).....	265,000.00	25,000.00	5,000.00	1,500.00	296,500.00
1897 (estimated).....	265,000.00	25,000.00	5,000.00	1,500.00	296,500.00

Balance in water fund June 30, 1895..... \$153,690.59  
 Estimated receipts, 1896..... 296,500.00

Total..... 450,190.59  
 Estimated expenditures, 1896..... 234,201.49

Estimated balance available June 30, 1896..... 215,989.10  
 Estimated receipts, 1897..... 296,500.00

Estimated total available, 1897..... 512,489.10

The receipts have fallen considerably below the estimates. The falling off is almost entirely in the receipts from water-main assessments, due to litigation as to their validity. The decision of the court of appeals was adverse to the District, and invalidates all water-main assessments made previous to its handing down. The amount invalidated can not now be exactly determined, but is very large, and such legislation as may be necessary to authorize the correction of informalities in the invalid assessments should be requested of Congress at its next session.

The force in the revenue branch is entirely inadequate to efficiently perform all the duties devolved upon it. The work of the office, as indicated by the receipts, has more than doubled in the past ten years, due to the rapid extension of the water-distribution system and increase in the number of water takers. Practically no increase in the force in this branch has been made in this time, and with present force it is

impossible to attend to the increased work of the office and maintain an adequate system of inspection for waste and leakage. The present number of inspectors should be at least doubled. With the prospective increase in the meter system the present force will be still more inadequate.

#### WATER METERS.

During the year the number of water meters in use has increased from 202 to 231. Only 29 new meters have been placed since the last annual report. Notwithstanding the extremely low meter rates, only 3 cents per 1,000 gallons, it is evident that meters will not be introduced as required by law until stringent measures for the enforcement of the law are taken.

The act of July 14, 1870, provides that "the supply of water to all manufacturing establishments, hotels, livery stables, and other places requiring a large quantity, shall be determined by meters erected and maintained at the expense of the consumer." This statute should be rigidly enforced, and from its enforcement may result a sufficient economy in the use of water by large consumers to somewhat diminish the inconvenience from deficient water supply that the public has now to submit to, and from which it must continue to suffer for some time, even if steps for an increased supply are undertaken at once.

There are more than 500 places that should be supplied with water through meters, under the above act, in addition to those now metered. The existing system of private ownership of meters has not proved satisfactory in this city, and it was desired in this department, in extending the system, that the necessary meters should be provided and owned by the water department. The Comptroller of the Treasury has, however, decided that the law requires that the consumer shall provide the meter, as well as place, and maintain it. New meter regulations have been drawn up, and during the coming year all consumers covered by the act of July 14, 1870, will be required to comply with its provisions.

The numbers, sizes, and kinds of water meters in service on July 30, 1895, are shown in the following table:

TABLE VII.—*Meters.*

Size.	Worth- ington.	Thomson.	Crown.	Nash.	Buffalo.	Union.	Total.
1-inch		1					1
1-inch							
1-inch	7	2	2	6	1		18
1-inch	17	13	15	7			52
1½-inch	19	17	17	11		1	65
2-inch	25	12	11	10			58
3-inch	13	3	8	3			26
4-inch	4	2					6
6-inch		1	3	1			5
Total	85	51	56	37	1	1	231

#### STREET LIGHTING.

At the close of the fiscal year the streets and roads in the District were being lighted by three hundred and thirty-eight 1,000-candle-power electric arc lamps, an increase of 11; 6,188 gas lamps, a decrease of 58, and 868 naphtha lamps, an increase of 121.

The service has been about the same as heretofore. The streets of this city are most difficult to light, owing to the great number of shade trees on the curb line. The heavy shade makes the use of large electric lights at wide intervals generally unsuitable, and the high price charged



by the electric-lighting company and the limited appropriations make it impossible to extend this system even to all the streets where the trees will permit. The trees are generally located so near the curb line that the lamp posts have to be set on practically the same line as the trunks of the trees, so that even in winter, when the trees are bare of leaves, the streets look gloomy at night as compared with those of most large capitals. Some experiments have been made with a view to a change in the type of lamp post and lantern to obviate this difficulty, but so far without developing anything that can be considered a satisfactory solution of the problem.

Some steps have been taken during the year to improve the methods of marking the names of streets at street corners. On streets lighted with gas and oil or naphtha the existing method of glass signs on the lanterns is perhaps as satisfactory as any other, although subject to the objection that the glass signs are frequently broken and are expensive and slow to replace. On streets lighted with electricity no entirely satisfactory method has as yet been found for this city. During the year a number of enameled street designations were placed on buildings at street corners on Pennsylvania avenue. It can not be said that the experiment has been satisfactory. The designations, while as large as practicable, are not sufficiently legible, and difficulty is experienced in finding suitable locations for them on buildings so that they may be seen from the footwalk as well as the roadway. The great width of roadways, sidewalks, and parkings removes the building in many cases to such a distance from the street corner to be designated that this method of marking the corners can not be universally satisfactory. Other methods will probably be tried in the near future.

The street-lighting service, so far as the appropriations permit, has been satisfactorily executed during the year. An advantageous contract was entered into for the substitution of naphtha for oil in lamps in alleys and where gas mains have not been laid. These lamps are lighted from forty minutes after sunset until forty minutes before sunrise every night of the year, and the contract price was \$17 per lamp per annum. For the next fiscal year the use of naphtha will be continued, and the service extended to include other lamps in alleys, in order to have all-night and every-night lighting in these places. The contract price is \$20.25 per lamp per annum, and the increased cost of the service, together with the limited appropriations, will prevent many necessary extensions.

An important change should be made in the number of hours for gas lighting. The acts making appropriations for street lighting with gas or oil have provided for a maximum price and a minimum of 3,000 hours of lighting per annum. In the gas-lighting service it has, to the present time, been impossible to secure from the gas companies more than the minimum service for the maximum price. The number of hours of total darkness, from the end of evening twilight to the beginning of morning twilight, is 3,116 in a year. All lamps should be lighted at least thirty minutes before and after evening and morning twilight, and one hour each night is allowed the gas companies for lighting and extinguishing, making a total of 3,846 hours per annum. With a 3,000-hour schedule and variable conditions of the sky, an uncertain twilight and an unreliable moon are called upon to furnish 846 hours of lighting per annum, or an average of 70.5 hours per month. It has been found impossible to so regulate the schedule as to secure this result, and even with the nearest possible approximation to it the service has been insufficient and caused many complaints. In this city, with the dense shade of trees at the curb, and in narrow, populous alleys, the moon is of practically no service as a factor in street lighting, and the attempt to use it as such



should be abandoned. A uniform schedule of 3,800 hours per annum should be adopted for all classes of street lighting.

A marked increase is asked for in the appropriations for street lighting. The existing service is not satisfactory or in keeping with the high standards maintained in the other branches of the city government. Nearly all the city streets are but dimly lighted, and many streets and populous alleys are not lighted at all. In many of the suburbs improvements are rapidly going forward, and there are not sufficient funds for establishing the absolutely necessary lights even in those suburbs that are practically a part of the city. The change from horse to power traction is steadily going forward on city transportation lines, and all streets occupied by power traction lines should be well lighted with electric arc lamps. The installation of electric lamps on the line of the Columbia Railway, from Fourteenth street and New York avenue NW., to Fifteenth and H streets NE., and on the lines of the Metropolitan Railway, are most urgently needed.

The reasons for the proposed increase in the salary of the superintendent of lamps are stated in the report of that officer, and are fully concurred in. It may be added, with every assurance of certainty, that no man competent to fill the position can be found who will hold it for any length of time at the salary of \$1,000 per annum. The position is a difficult one to fill, requiring technical training and experience, and frequent changes in it are most disadvantageous to the service.

The services of an additional inspector are necessary, and a clerk should be provided for, in order that the necessary clerical work now done by the inspectors may be removed from their hands, leaving them freer to attend to their proper duties.

#### INSPECTION OF GAS AND METERS.

Four laboratories for testing gas have been in operation during the year. The gas supplied by the Washington Gaslight Company is tested at 403 Tenth street NW., 1335 Fourteenth street NW., and at Fifth and D streets SE. The gas furnished by the Georgetown Gas Light Company is examined at 1338 Thirty second street NW. The quality of the gas has been tested at these laboratories daily, and has, with very few exceptions, exceeded the standard prescribed by law.

The contingent expenses of the two new laboratories and the one in Georgetown are paid by the gas companies, in accordance with the provisions of the appropriation bill for 1894. There appears to be no good reason why the remaining laboratory—the one on Tenth street—should not be provided for in the same way. I would recommend that the necessary legislation be obtained to secure this result.

For more detailed information with regard to the operations of the different departments, attention is invited to the reports herewith of their respective heads.

In conclusion, I have great pleasure in bearing witness to the faithful, conscientious, and painstaking performance of their duties by all of my assistants in this division, and in acknowledging the assistance received from them in caring for the important duties in my charge.

Very respectfully, your obedient servant,

EDW. BURR,

*Captain of Engineers, U. S. A., Asst. to Engineer Commissioner.*

Maj. CHAS. F. POWELL,

*Corps of Engineers, U. S. A., Engineer Commissioner, D. C.*



*Number of assistant engineers, inspectors, foremen, and other employees, regular and temporary, and appropriations from which paid, in the water and street-lighting division, for the year ended June 30, 1895.*

Designation.	Number employed.	Appropriation for pumping expenses and pipe distribution, 1895.	Extension of the high-service system of water distribution.	Appropriation for purchase and repair of pumps, 1895.	Appropriation for street lighting, 1895.	Appropriation for electric lighting, 1895.	Total.
Assistant engineer.....	1		\$1,199.00				\$1,199.00
Inspectors.....	4	\$435.00	664.00			\$773.00	1,872.00
Foremen.....	9	1,263.56	816.38	\$1,197.86			3,277.80
Other employees.....	354	39,377.71	33,107.43	2,233.16	\$124.50		74,832.80
Total.....	368	41,076.27	35,786.81	3,421.02	124.50	773.00	81,151.60

### REPORT OF THE SUPERINTENDENT OF THE WATER DEPARTMENT.

WASHINGTON, D. C., August 20, 1895.

SIR: I have the honor to submit the following report upon the operations of the distribution branch of the water department for the fiscal year ended June 30, 1895.

The total length of water mains laid during the year is 142,902½ feet—2,733 feet of 3-inch, 5,412 feet of 4-inch, 100,379½ feet of 6-inch, 27,730½ feet of 12-inch, and 6,616½ feet of 24-inch. Of this amount 14,253½ feet of 6-inch water main was laid for the Columbia Railway Company, on account of the introduction of cable power, at a cost of \$10,054.14; of this amount \$4,554.14 was paid by the railway company and \$5,500 was charged against the annual appropriation for the water department. Fourteen thousand six hundred and fifty feet of 6-inch main was laid along the Ninth street line of the Metropolitan Railway Company on account of the change of motive power to the underground electric system, at a cost of \$19,560.25 for labor and material. Of the total cost of the work, \$5,722.16 was paid by the Metropolitan Railway Company and \$13,838.09 was charged against the annual appropriation for the water department.

Three thousand four hundred and five feet of 6-inch water mains were laid in the erection of fire hydrants; 1,072 feet of 6-inch and 1,300 feet of 12-inch water mains were lowered to the required depth. One hundred three-quarter-inch lead service pipes, 2,811 feet, and 122 1½-inch cast-iron service pipes, 4,554 feet, were laid from the mains to within 6 feet of the building line on streets to be improved with pavements of a permanent nature. Eight hundred and forty feet of service pipes were lowered and stopcocks and street washers adjusted to new grade, 35 stop-valve casings adjusted to new grade, 92 repairs made to stop valves, and 399 new stop valves were connected to water mains.

The following table shows the locations of water connections made at the expense of applicants:

Location.	Size.	Length.
	<i>Inches.</i>	<i>Lin. feet.</i>
Fifteenth street, between I and K NW.....	3	53
Tenth street, between D and E SW.....	3	41
Fourteenth and Corcoran streets NW.....	3	33
Bennings road, between Fifteenth and Sixteenth streets NE.....	3	43
Ninth street, near B SW.....	3	15
Fourteenth street, between Columbia and Kennesaw avenues NW.....	3	78
Third and A streets NE.....	3	39
Alley, between Fifteenth and Sixteenth, L and M streets NW.....	3	5
Newark street and Tenley road.....	4	15½
Third and A streets SE.....	4	36
Florida avenue, between Sixth and Seventh streets NW.....	4	81
Delaware avenue and I streets NE.....	4	55
Bunker Hill road.....	4	39
Total.....		536½

There are 1,688 fire hydrants in service; 190 fire hydrants were erected in new locations; 3 fire hydrants moved to new curb line; 4 fire hydrants moved from one location and erected in another; 5 old fire hydrants removed and new hydrants erected in their place; 781 repairs were made to fire hydrants. There are about 800



McClelland fire hydrants in service that are nearly worn out, and that require constant attention to keep them in condition for service. I would recommend that they be gradually replaced with new hydrants. There are 320 public hydrants in service; 27 new hydrants erected; 14 erected in place of old ones; 18 removed and abandoned; 2 moved to new curb line; 742 repairs were made to hydrants.

There are 67 drinking fountains for animals in the District; 5 new fountains were erected; 125 repairs made to fountains.

There are 171 public pumps and wells in the District; 13 new pumps were erected; 47 pumps removed and the wells filled and abandoned; 50 wells cleaned; 427 repairs made to pumps. Two wells were sunk to a depth of 146 feet and lined with 6-inch wrought-iron pipe and deep-well pumps erected; one on Brightwood avenue south of Military road, and one at Sixth and G streets SW. Samples of water from these wells have been analyzed by the chemists of the engineer and health departments and found exceptionally pure. I renew the recommendation made in my annual reports of 1889 and 1890, that the annual appropriation for the purchase of public pumps and care of wells be increased from \$4,000 to \$6,000, and that \$2,000 of the amount be used for sinking wells to a considerable depth by boring and lining them with wrought-iron tubing and erecting pumps adapted for deep-well service.

The following tables will show the locations of public pumps and locations of public wells filled and abandoned during the year:

*Location of public pumps.*

NORTHWEST.

Location.	Street or avenue.	Location.	Street or avenue.
West side.....	Thirty-fifth, near T.	Southeast corner...	Ninth and H.
Southeast corner...	Thirty-fourth, near U.	North side.....	Louisiana avenue, between Ninth and Tenth.
Northwest corner...	Thirty-fourth and S.	Southwest corner...	Eighth and F.
West side.....	Thirty-fourth and Q.	Southeast corner...	Eighth and L.
East side.....	Thirty-fourth, between P and Q.	East side.....	Seventh, between L and M.
Southwest corner...	Thirty-second, near T.	Northwest corner...	Sixth and K.
West side.....	Thirty-second and R.	Northeast corner...	Sixth and H.
	Thirty-second, between P and Q.	East side.....	Sixth, between F and G.
Southeast corner...	Thirty-second, between O and P.	Southeast corner...	Fifth and Ridge.
Northwest corner...	Thirty-second and Dunbar- ton.	East side.....	Fifth, between I and K.
West side.....	Thirty-third and N.	Northeast corner...	Vermont avenue and L.
South side.....	Valley, near Q.	Northwest corner...	Thirteenth and M.
	O, between Thirty-first and Thirty-second.	South side.....	H. between Fourth and Fifth.
Northwest corner...	Twenty-eighth and O.	Northwest corner...	Fourth and M.
Southwest corner...	Twenty-sixth and P.	West side.....	New Jersey avenue, between M and N.
Northwest corner...	Twenty-seventh and K.	Southeast corner...	New Jersey avenue and Pierce.
West side.....	Twenty-sixth, between E and F.	Northwest corner...	Third and L.
Southeast corner...	Twenty-sixth and D.	South side.....	New York avenue, between Fourth and Fifth.
Southwest corner...	Twenty-third and M.		New York avenue, between Sixth and Seventh.
North side.....	D, between Twenty-second and Twenty-third.	North side.....	G. between First and North Capitol.
South side.....	Twenty-second and B.		Massachusetts avenue, be- tween First and North Capitol.
	Virginia avenue, between Twenty-first and Twenty- second.	Northeast corner...	Third and Indiana avenue.
North side.....	I, near Twenty-first.	West side.....	Four and a-half, between C and D.
	T, between Seventeenth and Eighteenth.	South side.....	E. between Seventeenth and Eighteenth.
	New York avenue, between Seventeenth and Eight- eenth.	North side.....	Massachusetts avenue, be- tween Sixth and Seventh.
Northwest corner...	Caroline, between Fifteenth and Sixteenth.	South side.....	Wilson, between Third and Fourth.
Northeast corner...	Sixteenth and Corcoran.	East side.....	Sixth (extended), near Lin- coln.
West side.....	Seventeenth and K.	Southeast corner...	Brightwood avenue and Irving.
Northwest corner...	Twelfth, between G and H.	West side.....	Brightwood avenue, south of Whitney.
	Twelfth and New York ave- nue.	East side.....	Brightwood avenue, Bright- wood, D. C.
Southwest corner...	Twelfth and Massachusetts avenue.	Northeast corner...	Sherman and Sheridan ave- nues.
Southeast corner...	Twelfth and N.	Southwest corner...	Sherman and Farragut.
East side.....	Twelfth and Florida avenue.	Northwest corner...	Fourteenth and Park.
Southeast corner...	Twelfth and Q.	North side.....	Sheridan avenue.
Southwest corner...	Eleventh, near G.	Southwest corner...	Eighth (extended) and Grant avenue.
Northwest corner...	Eleventh and M.	Brightwood avenue	South of Military road.
Northeast corner...	Tenth and K.		
Northwest corner...	Tenth and N.		
	Ninth and I.		

*Location of public pumps—Continued.*

## NORTHEAST.

Location.	Street or avenue.	Location.	Street or avenue.
East side.....	North Capitol, between B and C.	Northeast corner..	Fifth and L.
Engine Co., No. 3...	Delaware avenue and C.	Northwest corner..	Sixth and C.
Southeast corner...	First and K.	East side .....	Sixth, between A and B.
Northwest corner...	First and G.	Northwest corner..	Eighth and A.
Southeast corner...	Second and E.	North side .....	E. between Eighth and Ninth.
Northwest corner...	Third and C.	Southwest corner..	Thirteenth and F.
	Third and Massachusetts avenue.	Northwest corner..	Eleventh and F.
East side .....	Third, between K and L.	North side .....	B. between Thirteenth and Fourteenth.
Southwest corner..	Fourth and I.	West side .....	Kendall, Ivy City.
Northwest corner...	Second and G.	East side .....	Lincoln avenue, between S and T.
Northwest corner...	Fourth and E.	Southeast corner...	North Capitol and Randolph.
Southeast corner...	Fourth and East Capitol.	North side .....	Keating avenue, near Glenwood road.
Southwest corner...	Fifth and A.		
Southeast corner...	Fifth and B.		

## SOUTHWEST.

North side.....	Fourteenth and D.	North side.....	I, between Four-and-a-half and Sixth.
	Virginia avenue, between Tenth and Eleventh.	South side .....	K, between Four-and-a-half and Sixth.
Northeast corner..	Eleventh and F.	Northwest corner..	Union and M.
South side .....	D. between Ninth and Tenth.	Southeast corner...	Union and N.
West side .....	Seventh, between G and H.	In alley .....	Third and Four-and-a-half, B and C.
Southeast corner...	S. seventh and I.	North side .....	B. between First and Second.
Northeast corner...	Seventh and M.	Southwest corner..	First and F.
East side .....	Sixth, between M and N.	Southwest corner..	South Capitol and N.
Southeast corner...	Seventh and E.	Southeast corner...	Half and P.
	Sixth and I.	East side .....	First near I.
North side .....	K. between Sixth and Seventh.	West side .....	Sixth, between M and N.
Northeast corner..	Sixth and Maryland avenue.		Sixth and G.
Southeast corner...	Four-and-a-half and Maryland avenue.		

## SOUTHEAST.

Northeast corner...	First and K.	Northwest corner..	Tenth and South Carolina avenue.
Southeast corner...	First and M.	South side .....	South Carolina avenue, between Tenth and Eleventh.
Northeast corner...	Half and N.	East side .....	Eleventh, between B and C.
North side .....	O. between Half and First.	South side .....	Eleventh, between G and I.
Northeast corner...	Second and I.		I, between Eleventh and Twelfth.
West side .....	Second and B.	East side .....	Eleventh, between N and O.
Southeast corner...	Third and Pennsylvania avenue.	Southeast corner..	Twelfth and G.
Southwest corner..	Third and C.	East side .....	Twelfth, between D and E.
Southeast corner...	Third and North Carolina avenue.	South side .....	E. between Twelfth and Thirteenth.
West side .....	Fourth and South Carolina avenue.	West side .....	Thirteenth, between D and E.
Southeast corner...	Fourth and C.		L. between Thirteenth and Fourteenth.
West side .....	Sixth, between D and E.		T. Hillsdale.
East side .....	Sixth, between C and Pennsylvania avenue.	Southeast corner..	Stanton and Elvin avenue, Hillsdale.
Southwest corner..	Sixth and B.	West side .....	Nichols avenue, opposite Birney School.
Southeast corner...	Sixth and A.	Northeast corner...	Washington and Pierce, Anacostia.
Northwest corner..	Seventh and B.	North side .....	Jefferson, between Morris and Fillmore, Anacostia.
East side .....	Seventh, between B and C.		Harrison and Pierce, Anacostia.
Northeast corner...	Seventh and Virginia avenue.	Southwest corner..	Fillmore and Jackson, Anacostia.
Northwest corner..	Eighth and I.	South side .....	Harrison and Minnesota, Anacostia.
Northeast corner...	Eighth and D.		
Southeast corner...	Eighth and A.		
	Ninth and C.		
Northeast corner...	Ninth and South Carolina avenue.		
Southeast corner...	Ninth and E.		
Southeast corner...	Tenth and E.		

*Location of public wells filled and abandoned during the fiscal year.*

Thirteenth and D streets SW.	Second and E streets SE.
Fourteenth and B streets SW.	Fifth and N streets NW.
Thirty-third and G streets NW.	Georgia avenue, between Third and Fourth streets SE.
K street, between Twenty-first and Twenty-second, NW.	Third and M streets SE.
Eighteenth and S streets NW.	New Jersey avenue, between I and K streets SE.
R street, between Eighteenth and Nineteenth, NW.	Fourth street, between G and H NE.
Eighth and C streets NE.	Fifteenth and K streets SE.
L street, between Sixth and Seventh NW.	Seventh and G streets SE.
Second and B streets NW.	Eighth street, between N and O NW.
Thirty-seventh and O streets NW.	Thirty-sixth and O streets NW.
Colfax street, between L and M, NE.	Fourth and D streets SE.
Fifth street, between P and Q NW.	Tenth street, between M and N SE.
Seventh street, between M and N NW.	First street, between N and O SW.
North, Carolina avenue, between First and Second SE.	Sixth and G streets SE.
K street, between Thirteenth and Fourteenth SE.	Third and D streets SW.
First and O streets NW.	Four-and-a-half and E streets, SW.
Seventh street and Virginia avenue SW.	F street, between Third and Four-and-a-half SW.
Sixth and O streets NW.	N street, between First and Second SE.
Second street, between A and East Capitol NE.	Sixth and H streets SW.
Fourth street and Pennsylvania avenue SE.	Sixth and G streets SW.
Brightwood avenue, north of Whitney.	Eighth and E streets SW.
Tenth and E streets SW.	Thirty-fifth and V streets NW.
Twenty-first street and New York avenue NW.	Ninth and A streets NE.
	Fourth and K streets NE.

At no time since the 48-inch main was laid has the pressing need of an ample supply of pure, clear water for all legitimate purposes been felt more than during the past year. The gradual diminution of pressure in the gravity supply and distribution mains has been the cause of much complaint among those living upon the higher levels. In a considerable number of locations the level at which Potomac water was delivered in 1893 and 1894 has fallen considerably and, in some localities, below the second stories. The equalization process was resorted to in a number of cases, and by manipulation of stops the flow of water in the mains to the lower ground was somewhat retarded. Where great inconvenience existed all that could be done to give temporary relief. The city and its environments are expanding rapidly; the population increasing; distribution system extending, not only within the city limits, but also to the suburban districts in northwest, northeast, and southeast portions, making the demand for an increased supply of water more imperative.

The present condition of the water supply renders it necessary that steps be taken to effectually repress the excessive waste, or a water famine and an unsanitary condition in some parts of the city can not be averted in the near future. From experience and observation, I am convinced that the careless waste of water can only be prevented by a systematic introduction of the meter system on all service pipes to premises where large quantities of water are consumed. Meters should also be placed on all supply pipes to public buildings in the District owned and leased by the United States, to determine the proportion of Potomac water actually consumed and wasted per diem. If this could be done, and stringent rules and regulations established by the heads of departments prohibiting the excessive use and careless waste of water, the enormous quantity now taken by the General Government would be materially reduced and a more equitable supply go to the consumers on the higher levels for some time to come.

I would urgently recommend that Congress at the next session be asked to make provision for the purchase and compulsory introduction of meters on service pipes to public and private buildings under such regulations as the Commissioners may deem necessary for economical use of water and suppression of waste. The meter system would undoubtedly reduce the present water rates in some places, but it is the only way economy in the use of water can be secured.

In making recommendation in favor of the compulsory use of meters, and in spite of extremely low meter rates (3 cents per 1,000 gallons) I am not unmindful that the community may not take to the meter system generously. I believe it is best for all concerned that the present limited supply of water should be used as sparingly as possible.

The Georgetown pumping station has not been in service since August, 1893. The engines and boilers are in good condition and are kept ready to relieve the Washington station in case of disablement to engines.

The Gaskill engines and boilers at U street station have been in almost continuous operation during the year. Occasionally at night the engines have been stopped a few hours only for repairs and necessary changes in the receiving and delivery mains on U street in front of the pump house. The engines have supplied the Washington and Georgetown middle high service areas since the discontinuance of the Georgetown station.



The water level in Georgetown reservoir has been kept standing in the early morning at 220 feet above datum—an increase of 2 feet above the maximum level carried during the time the Georgetown station supplied the reservoir. It has been impossible to maintain a uniform level of water in the reservoir during the day, owing to the rate of delivery through the present 12-inch supply main from the U street station being considerably less than the rate of consumption, leaving the area to be fed to some extent dependent on the storage of water in the reservoir at night.

The Gaskill engines have not been thoroughly overhauled in two years. At present they are much in need of repairs, but owing to several unavoidable delays in the completion of the new 5,000,000 plant at the U street station the engines can not be stopped for any length of time. The average daily pumpage at the U street station at the close of the fiscal year 1894 was 2,571,429 gallons; the average daily pumpage at the close of the last fiscal year was 3,313,386 gallons, an increase of 733,959 gallons. The average cost of pumpage for the middle high-service areas was 8½ cents per 1,000 gallons.

The Knowles pump erected in the engine room of the U street station in July, 1894, for supplying temporarily the Fort Reno high service until the completion of the new reservoir at that point has been in almost continuous operation delivering water into a tank at Fort Reno 320 feet above the pump, through the 12-inch delivery main 22,500 feet in length, laid in 1894, to supply the new reservoir. The average daily pumpage at Fort Reno at the close of the last fiscal year was 47,253 gallons. The line of 12-inch main from Fort Reno along the Chappell, Broad Branch, Rock Creek Ford, and Military roads to Brightwood avenue, and on Brightwood avenue from Flint to Aspen streets, which was nearly all laid in 1894, except two short sections at low points, was completed on the 30th of last June and charged with water from the Fort Reno main. The 6-inch mains on Flint, Ninth, and Des Moines streets in Brightwood Park connecting with the 12-inch on Brightwood avenue at Flint street were charged at the same time, making a total of 56,874.48 feet of 12 and 6 inch mains in the Fort Reno high-service area. The average pumpage to Fort Reno and Brightwood since the introduction of water in the Brightwood mains was 65,110 gallons. The new reservoir at Fort Reno of 4,200,000 gallons capacity will probably be completed and ready for storage of water November 1, present year.

The contract for the erection of the Nordberg pumping engine, 5,000,000 gallons capacity, and two water-tube boilers at the U street station specified that the plant should be completed and ready for duty trial November 5, 1894. During the month of October, 1894, a considerable portion of the machinery while in transit from Milwaukee to this city was thrown from a car and badly injured. The accident to the machinery caused a delay of several months and necessitated several extensions of the original contract. The new engine has been operated at intervals during the past six weeks for the purpose of adjusting the various parts, and will be in condition for the trial test during the present month.

The Nordberg engine was especially designed to supply the new reservoir at Fort Reno, an elevation of 320 feet above center of pumps, and also for the middle high-service areas. A 24-inch suction and delivery main was laid at the U street station in the spring and early part of the summer for the Nordberg engine and a second new engine, 8,000,000 gallons, the latter to take the place of the east Gaskill engine, 2,500,000 gallons capacity, in the near future. The suction and delivery mains referred to are arranged with connections and valves, so that the Nordberg engine can deliver to the Fort Reno reservoir or may be used for supplying the middle high service. The new mains in connection with the Fort Reno and middle-service system in front of the U street station were laid with great care, pipe, valves, and specials are firmly supported by piers of concrete and brick laid in hydraulic mortar to prevent the pipes from settling or leaking at joints.

A 24-inch delivery main for the middle high service was laid from the U street station along New Hampshire and Florida avenues to Thirteenth street extended, north on Thirteenth street extended to Whitney avenue, and connections made with 6-inch high-service mains and 12-inch mains at Sixteenth and U streets to Mount Pleasant, 12-inch main at Florida avenue and Thirteenth street extended to Brightwood avenue, Eckington, and Brookland, and with the 12-inch main on Whitney avenue at Thirteenth street extended. Since water was introduced in the 24 inch main in June, the pressures in the Washington middle-service area have increased considerably, and the delivery of water to the Georgetown reservoir through the present main has been somewhat more satisfactory. The extension of the 24-inch middle high-service delivery main from Whitney avenue and Thirteenth street extended to a point within or near the Soldiers' Home and the construction of a 15,000,000-gallon distribution and storage reservoir—elevation about 262 feet above datum—and the erection of a new pumping plant, 8,000,000 gallons capacity, at the U street station for the middle service, as contemplated during the present fiscal year, are urgently recommended for the reason that the middle high-service area is rapidly extending north and south of Florida avenue. A further extension of the middle

high-service area south of Florida avenue and east of Rock Creek as far as Eckington to levels of 80 feet above datum can not be averted during the present fiscal year. This extension will gradually increase the daily pumpage at the U street station beyond the capacity of present engines.

The displacement of one of the 2,500,000-gallon engines by one of 8,000,000 capacity can not be effected too soon to meet the present and future demand for a greater supply in the middle service. With the proposed increase in the pumping capacity the reservoir at Fort Reno and the reservoir to be located at or near the Soldiers' Home could be very nearly supplied at night from the U street station at a time when the supply of water for both reservoirs could be taken from the gravity mains without affecting to any extent the pressure during the day. The maximum quantity of water taken from the gravity mains during twenty-four hours is from 6 a. m. to 6 p. m., and with the present inadequate supply of water to do nearly all the pumping at night for both high service areas would assist materially in keeping the pressures up for some time in localities where they are rapidly growing less.

In the event of the examination and test of the tunnel connecting the receiving reservoir with the storage reservoir at Howard University demonstrating that the tunnel can be used to increase the water supply for the city, a 48-inch connection could be made with the Champlain avenue shaft and a 48-inch main laid in Champlain avenue, V, Seventeenth, and U streets to the U street pumping station capable of delivering all the water necessary for pumping engines for many years to come.

The 20-inch middle service delivery main recently authorized to be laid from the U street station to Georgetown and connections made with existing mains, when completed, will improve the water supply on the higher elevations that heretofore have not received a just proportion of water.

With the proposed middle service reservoir at Soldiers' Home, 265 feet above datum, water can be delivered to the Georgetown middle service to a height of about 40 feet above maximum level of water allowable in the old reservoir; the reservoir can then be dispensed with.

The laying of a 12-inch gravity main from Tenth and B streets south, south on Tenth to H street, east on H street to Four-and-a-half street, and connections made with 20-inch main at Tenth and B streets south, existing mains on H street and 12-inch main on Four-and-a-half street at H street, as contemplated, will equalize the pressure and greatly benefit that portion of the southwest section where considerable complaint has been made on account of a meager supply of water.

A 12-inch middle service main should be laid on Columbia avenue from the Quarry road to Florida avenue, and connections made with existing 12-inch main on Columbia avenue at Quarry road, 6-inch mains along Columbia avenue to Nineteenth street extended, and with the proposed 20-inch middle service delivery main for Georgetown at Florida and Columbia avenues, to reinforce the present mains on Washington Heights, and afford necessary protection in case of fire.

I renew my recommendation of 1891 for the extension of the 12-inch middle service main at First and Albany streets to Lincoln avenue by the way of First and T streets, and on Lincoln and Central avenues to Brookland, and connections with existing 6-inch mains at Lincoln avenue and T street, Central avenue and Fourth street extended, and in Brookland. The necessity for laying this main is much greater now than at that time for the reason that the 6-inch mains in Brookland have been largely extended within the past six months. Eckington and Brookland are now, as then, wholly dependent on one 6-inch main for water, and in case of fire serious loss of property may result from insufficient supply of water for fire purposes. The proposed extension of Albany street through Prospect Cemetery to Lincoln avenue may not be carried out for several years; I would therefore recommend, in the interest of public safety, that the main be laid as soon as practicable.

The lot recently purchased by the Commissioners on the north side of U street west of the pumping station, and the additional ground at the east line of the pump-house lot, leaving a space of 5 feet between the east line and the adjoining property, was a step in the right direction, the water department having been in pressing need of more ground at this station for the past five years.

Upon completion, the new building and stack proposed to be erected on present site, U street station, covering the entire lot, will be a model structure of its kind, and will include coal vault, storerooms, shops, and room for testing and storing water meters.

In conclusion, in submitting this report I beg leave to commend the fidelity and general efficiency of the employees of this office.

Respectfully submitted.

H. F. HAYDEN,  
*Superintendent, Water Department.*

Maj. CHARLES F. POWELL,  
*Corps of Engineers, U. S. A., Engineer Commissioner, D. C.*



## REPORT OF THE WATER REGISTRAR.

ENGINEER DEPARTMENT, WATER OFFICE,  
Washington, D. C., August 7, 1895.

SIR: I have the honor to submit the following report of the operations of the revenue and inspection division of the water department for the year ended June 30, 1895:

Inspections made.....	20, 639
Leaks found.....	1, 399
Leaks repaired.....	1, 390
Wastes found.....	65
Warrants procured.....	65
Fines paid in police court.....	\$41. 00
Forfeits.....	\$41. 00
Bonds taken in cases.....	37
Cases dismissed.....	5
Bills delivered by inspectors.....	36, 831
Meters set during the year.....	29

The following tables are submitted:

Table I.—Statement of the receipts of the water department from all sources, from July 1, 1878, to June 30, 1895, amounting to \$3,586,937.26.

Table II.—Statement of expenditures from July 1, 1878, to June 30, 1894, amounting to \$1,989,969.29.

Table III.—Statement of assessments and collections of water-main tax from June 30, 1878, to July 1, 1895. Total amount assessed, \$925,360.09; total amount collected, \$632,992.38.

Table IV.—Statement of advances to the Treasurer of the United States from 1880 to 1895, amounting to \$1,443,264.63.

Table V.—Number and size of houses in the District of Columbia supplied with Potomac water.

Table VI.—Number of miscellaneous water takers.

Table VII.—Kind, size, and number of water meters in use to June 30, 1895.

*Estimates for the revenue and inspection branch of the water department for fiscal year 1897.*

One water registrar.....	\$1, 800
Two clerks, at \$1,400 each.....	2, 800
Two clerks, at \$1,000 each.....	2, 000
One chief inspector, at \$1,000 (\$64 submitted).....	1, 000
Ten inspectors, at \$900 (4 additional submitted).....	9, 000
One messenger.....	600
For contingent expenses, including books, blanks, stationery, forage, printing, advertising, and other necessary items and services.....	2, 500

There are now 44,000 premises in the District of Columbia where Potomac water is used. Owing to the great area of ground to be covered in the inspection for leaks and waste of water, in the delivery of water bills and water-main assessment notices—the requirements of the law making the personal delivery of the latter obligatory where possible—the present force of inspectors is found to be inadequate for the performance of all the duties assigned it.

I therefore renew my recommendation for the appointment of four additional inspectors at a salary of \$900 each.

Very respectfully,

JNO. J. BEALL,  
Water Registrar.

Maj. CHAS. F. POWELL,  
Corps of Engineers, U. S. A., Engineer Commissioner.



TABLE I.—Statement of receipts of the water department, District of Columbia, from July 1, 1878, to June 30, 1895.

Fiscal year.	Balance on hand July 1, 1878.	Mains to Government Printing Office.	Water-main tax.		Interest, water-main tax.		Water rents.	Taps.	Permits and other sources.	Total receipts.
			Advertised.	Current.	Advertised.	Current.				
Balance on hand July 1, 1878.....	\$16,809.42									\$16,809.42
Received year ending June 30—										
1879.....			\$6,195.59	\$12,463.10	\$1,635.96	\$1,059.53	\$43,574.24	\$1,986.00	\$2,139.25	169,053.67
1880.....			10,248.87	11,926.81	3,457.43	1,340.18	165,641.42	1,980.00	2,188.10	2,188.10
1881.....			3,200.38	18,368.39	1,228.94	1,040.08	109,737.83	1,851.00	1,915.72	196,782.81
1882.....		\$2,800.00	4,017.92	3,305.50	2,086.07	392.34	101,621.10	1,815.00	1,798.71	140,842.34
1883.....		1,750.00	7,320.13	5,467.96	3,769.83	350.54	65,752.24	2,193.00	2,188.72	117,827.64
1884.....			3,563.12	8,700.53	2,365.59	122.42	119,610.20	3,402.00	2,418.79	88,792.42
1885.....			3,292.57	14,430.22	2,592.81	267.28	118,528.20	3,402.00	3,076.09	139,173.65
1886.....			3,564.81	29,631.30	2,343.44	622.49	124,896.22	5,096.00	3,456.03	145,585.17
1887.....			7,630.50	34,874.59	3,183.62	1,494.53	138,539.49	6,012.00	4,816.45	169,613.29
1888.....			8,605.53	19,939.91	5,120.55	1,098.86	171,892.49	4,182.00	4,806.92	196,581.18
1889.....			5,524.26	36,464.29	3,192.09	1,098.94	189,407.39	5,190.00	5,576.16	215,149.26
1890.....			9,207.61	29,257.28	5,364.04	1,557.62	197,053.34	5,313.72	6,327.95	246,454.13
1891.....			2,863.02	45,055.34	1,630.54	1,774.03	209,664.29	5,640.00	6,869.79	254,081.56
1892.....			4,562.67	60,415.38	2,064.56	1,764.74	220,892.93	5,790.00	6,280.81	301,771.09
1893.....			4,081.83	63,099.31	1,516.15	1,329.04	235,911.25	7,307.09	7,931.71	321,176.38
1894.....			3,764.01	80,407.07	1,273.32	1,531.04	245,899.69	4,497.00	1,108.79	338,540.92
1895.....			4,294.88	65,014.15	1,379.30	2,284.41	251,872.71	4,537.55	2,100.60	331,483.10
Repayments—various fiscal years.....										24,158.25
Special assessment—service pipes.....										1,063.97
Total.....	16,809.42	4,550.00	91,927.20	538,821.13	44,230.24	20,629.07	2,710,495.03	69,165.36	65,087.59	3,586,937.26

<sup>1</sup> This does not include \$12.50 which the United States Treasurer has credited to this year's receipts, but which does not appear on books of water department.<sup>2</sup> December 10, 1880, there was collected \$10.75 on account of water-main tax (advertised), which sum was deposited to credit of "arrears of general taxes."<sup>3</sup> July 29, 1890, there was collected \$2 on account of water rents, which sum was deposited to credit of general taxes August 13, 1890.

TABLE II.—*Expenditures.*

Fiscal year.	Purchase of pump-house lot and erection of stand-pipe.	Extra clerical services making new water-rent and numerical books.	High service.	Material and labor, pumping expenses, and pipe distribution.	Salaries water department.	Contin- gent expenses.	Water rent refunded.	Water- main tax refunded.	Interest on water- main tax refunded.	Purchase of new pumping engines and boilers.	Water main to Govern- ment Printing Office.	Total expendi- tures.
Expended from July 1, 1878, to June 30, 1884.....	\$36,488.26	\$1,225.00	\$99,458.16	\$1,153,075.37	\$285,355.97	\$30,012.89	\$42,290.03	\$1,779.04	\$170.81	\$33,041.24	\$8,946.21	\$1,091,752.98
Expended 1885, account 1883.....	.....	.....	.....	9,764.51	1,921.66	.....	.....	.....	.....	.....	.....	1,921.66
Expended 1886, account 1884.....	.....	.....	.....	79,246.01	178.46	253.57	.....	.....	.....	.....	.....	10,196.54
Expended 1896, account 1896.....	.....	.....	166,812.38	.....	36,802.36	2,195.71	748.18	285.47	8.00	.....	.....	286,098.11
Total .....	36,488.26	1,225.00	266,270.54	1,242,085.89	324,238.45	32,462.17	42,948.21	2,064.51	178.81	33,041.24	8,946.21	1,930,969.29

TABLE III.—Statement of assessments and collections of water-main tax from July 1, 1878, to June 30, 1895.

Fiscal year.	Amount assessed.	Duplicate payments and over-payments.	Six per cent abatement.	Amount of tax canceled subsequent to July 1, 1878.	Amount collected, July 1, 1878, to June 30, 1895.	Amount outstanding July 1, 1895, subject to exemption act of March 3, 1881.	Amount of collectible tax outstanding July 1, 1895.
From June 30, 1878, to June 30, 1894.....	<sup>1</sup> \$757,738.72	<sup>1</sup> \$1,789.30	<sup>2</sup> \$20,180.77	\$27,202.07	\$563,683.85	\$4,113.78	\$144,347.55
1895 .....	187,621.37	285.47	<sup>2</sup> 2,592.37	26,500.14	69,308.53	.....	69,505.80
Total.....	925,360.09	2,074.77	22,773.14	53,702.21	632,992.38	4,113.78	213,853.35

<sup>1</sup>Of this amount \$94,124.78 was outstanding and uncollected July 1, 1878.<sup>2</sup>Of this amount \$223.75 is abatement allowed property owners on College Hill for amounts paid by them to R. A. Charles.<sup>3</sup>From this abatement \$11.25 was deducted on account of refund of erroneous payment.

## RECAPITULATION.

Total amount of assessments plus duplicate payments .....	\$927,434.86
Amount of abatement at 6 per cent. ....	22,549.39
Amount of abatement allowed property owners on College Hill for amounts paid by them to R. A. Charles .....	223.75
Amount of tax canceled and struck off books since July 1, 1878:	
By order of Commissioners District of Columbia, decision of Supreme Court, etc., various dates .....	53,702.21
By amount subject to exemption, act March 3, 1881 .....	4,113.78
Amount of tax collected from July 1, 1878, to June 30, 1895 .....	632,992.38
Amount of collectible tax outstanding July 1, 1895 .....	213,853.35
Total .....	927,434.86

TABLE IV.—Advances to Treasurer United States.

Fiscal year.	Interest and sinking fund, water-stock bonds.	Interest and sinking fund, increasing water supply.	Interest and sinking fund, 48-inch and Fourteenth street mains.	Total interest and sinking fund.
Advanced to Treasurer United States, ex officio commissioner of sinking fund District of Columbia:				
1880 .....	\$74,025.00	.....	.....	\$74,025.00
1881 .....	74,123.77	.....	.....	74,123.77
1882 .....	43,796.08	.....	.....	43,796.08
1883 .....	44,610.00	.....	.....	44,610.00
1884 .....	44,575.00	.....	.....	44,575.00
1885 .....	44,610.00	\$13,686.23	.....	58,296.23
1886 .....	31,485.00	55,047.27	.....	86,532.27
1887 .....	57,735.00	.....	.....	57,735.00
1888 .....	31,485.00	57,239.02	.....	88,724.02
1889 .....	44,610.00	76,655.69	.....	121,265.69
1890 .....	44,610.00	81,263.26	.....	125,873.26
1891 .....	44,610.00	71,164.21	.....	115,774.21
1892 .....	44,610.00	69,991.13	.....	114,601.13
1893 .....	44,610.00	68,817.14	\$20,713.89	134,141.03
1894 .....	44,610.00	67,537.17	20,358.80	132,505.97
1895 .....	44,610.00	62,052.27	20,003.70	126,665.97
Total .....	758,714.85	623,473.39	61,076.39	1,443,264.63

## RECAPITULATION.

To amount collected, of which there has been deposited in the United States Treasury and credited to water fund, the sum of .....	\$3,586,937.26
By amount expended from July 1, 1878, to June 30, 1895 .....	1,989,969.29
By amount advanced to Treasurer United States, ex officio commissioner sinking fund District of Columbia, during said period .....	1,443,264.63
By amount collected on account of water-main tax and deposited to credit of general taxes December 20, 1880 .....	10.75
By amount collected on account of water rent July 29, 1890, and deposited to credit general taxes August 13, 1890 .....	2.00
Balance to credit of water fund, District of Columbia, July 1, 1895 .....	153,690.59
Total .....	3,586,937.28

TABLE V.—Houses in the District of Columbia supplied with Potomac water.

Front feet.	Two stories.				Three stories.				Four stories.				Five stories.				Six stories.	Eight stories.		Thirteen stories.		
	Georgetown.	Northwest.	Northeast.	Southwest.	Southwest.	Southwest.	Southwest.	Total.	Georgetown.	Northwest.	Northeast.	Southwest.	Southwest.	Southwest.	Total.	Northwest.		Northwest.	Total.		Grand total.	
16.....	812	7,318	2,985	3,162	2,456	16,733	157	1,988	880	321	310	3,656	6	548	12	2	16	584	17	1	18	20,991
17.....	76	562	474	133	224	1,479	41	503	186	89	125	944	1	239	19	1	6	266	17	1	19	2,706
18.....	74	763	433	175	225	1,670	85	1,015	298	117	173	1,688	14	367	57	6	33	477	8	1	10	3,844
19.....	22	248	138	45	39	492	11	519	99	18	97	744	4	240	13	1	12	270	4	4	9	1,510
20.....	163	1,059	175	209	303	1,909	89	1,048	189	103	154	1,583	29	749	71	15	14	878	36	5	41	4,411
21.....	37	173	26	35	41	312	24	213	22	24	25	308	6	159	24	1	16	206	9	2	11	837
22.....	46	255	42	56	63	442	29	338	28	40	42	483	7	244	16	6	9	282	16	2	16	1,223
23.....	18	74	17	15	19	143	27	143	11	13	16	210	8	144	4	5	162	11	11	11	1,526	
24.....	30	105	17	36	36	224	27	210	20	18	7	282	6	217	9	6	3	241	19	1	20	768
25.....	17	141	32	37	22	249	27	301	14	23	20	385	10	316	7	9	6	348	25	1	26	1,008
26.....	5	58	8	3	10	84	12	282	3	6	7	310	4	91	4	1	1	164	14	1	14	162
27.....	2	20	3	5	5	35	5	40	1	1	2	49	9	51	2	1	1	54	7	1	7	293
28.....	12	41	7	2	6	68	9	52	4	3	6	74	1	48	3	1	1	27	5	5	6	86
29.....	3	16	4	7	2	27	2	22	3	3	4	27	4	21	2	2	2	68	3	3	3	240
30.....	6	58	7	7	7	85	14	58	4	3	5	84	2	60	2	1	1	18	1	1	1	52
31.....	3	3	4	4	1	4	2	20	5	2	2	30	2	14	1	1	1	17	2	1	1	70
32.....	5	12	3	3	3	21	5	16	1	1	1	19	1	10	2	1	1	21	1	1	1	61
33.....	4	5	2	3	3	17	5	12	1	1	1	19	1	19	1	1	1	21	1	1	1	87
34.....	3	12	3	3	3	21	4	12	2	1	1	30	1	19	1	1	1	10	2	1	1	73
35.....	4	15	1	1	16	36	4	22	1	1	1	30	1	19	1	1	1	17	1	1	1	53
36.....	1	1	1	1	1	17	3	32	2	1	1	38	1	15	1	1	1	17	1	1	1	17
37.....	1	1	1	1	1	17	2	1	1	1	1	5	1	2	1	1	1	4	1	1	1	33
38.....	6	2	3	1	1	12	1	12	1	1	1	13	1	25	1	1	1	27	1	1	1	27
39.....	4	2	4	1	1	6	3	4	1	1	2	9	1	12	1	1	1	12	1	1	1	131
40.....	6	19	4	1	5	34	7	20	3	1	1	39	3	55	1	1	1	58	1	1	1	21
41.....	2	8	1	1	1	3	6	8	1	1	1	7	1	11	1	1	1	11	1	1	1	37
42.....	1	8	1	1	1	10	2	8	1	1	1	11	1	14	1	1	1	15	1	1	1	20
43.....	1	4	1	1	1	6	1	5	1	1	1	5	1	9	1	1	1	9	1	1	1	27
44.....	5	10	1	1	1	6	1	10	1	1	1	11	1	9	1	1	1	10	1	1	1	22
45.....	4	4	1	1	1	4	1	3	1	1	1	3	1	25	1	1	1	26	1	1	1	9
46.....	4	4	1	1	1	4	1	3	1	1	1	3	1	14	1	1	1	15	1	1	1	15
47.....	1	1	1	1	1	2	1	2	1	1	1	8	1	6	1	1	1	6	1	1	1	9
48.....	1	3	1	1	1	1	2	6	1	1	1	8	1	6	1	1	1	6	1	1	1	15
49.....	2	2	1	1	1	1	1	2	1	1	1	1	3	21	1	1	1	3	1	1	1	5
50.....	1	6	1	1	1	3	1	16	2	1	1	21	2	21	1	1	1	24	1	1	1	55
51.....	1	1	1	1	1	3	1	3	1	1	1	1	1	3	1	1	1	3	1	1	1	7
52.....	1	2	1	1	1	3	1	3	1	1	1	1	1	3	1	1	1	2	1	1	1	6

[illegible]

TABLE VI.—*Miscellaneous water takers.*

	George- town.	North- west.	North- east.	South- west.	South- east.	Total.
Asylums	1	2	2			5
Armories		7				7
Baseball grounds		2				2
Barbershops	4	105	8	7	6	130
Bakeries	7	48	8	18	9	90
Banks	2	14			2	18
Barrooms	16	251	30	64	36	397
Boarding houses	2	110	34	1	6	153
Breweries		2	2		1	6
Bottling depots	1	7	2	6	1	17
Book binderies		4				4
Baths	1	2				3
Brickyards			2		3	5
Colleges	1	12				13
Churches	19	58	5	15	13	110
Cemeteries	1			1		2
Clubrooms		10		1		11
Convents	1	1				2
Car stables	2	6	5	3	4	20
Dining rooms		22				22
Dyehouses	1	14				15
Enginehouses	1	6	2	1	2	12
Florists		3				3
Foundries	3	7	3			13
Factories	1				2	3
Gas engines		3	1	1		5
Greenhouses	2	9	6		5	22
Halls	3	46		3	7	59
Hospitals	1	8	2	1	1	13
Hotels	1	39				40
Laundries	2	36	1	4	4	47
Manufactories	1	16	2		1	20
Market houses	1	4			1	6
Mills	5	3	1	2		11
Museums				3		3
Motors		2				2
Orphan asylums		5				5
Offices	15	777	6	6	7	811
Printing houses		15	1			16
Police stations	1	4	2	1	1	9
Photograph galleries		26				26
Restaurants	6	226	3	5	19	259
Railway stations		2	1			3
Riding schools		2				2
Stables, livery	3	54	3	1	5	66
Stables, private	50	774	76	18	34	952
Shops	9	136	7	8	8	168
Steam boilers		57	4	2	2	65
Steam engines	15	68	6	14	5	108
Slaughterhouses		2	3			5
Stores	365	1, 077	31	73	105	1, 651
Schools, public	6	37	15	4	6	68
Schools, private	1	25	2	2	1	31
Stone yards	7	5	3			15
Steamboat wharves				9		9
Theaters		4				4
Truck company A			1			1
Truck company B			1			1
Truck company C						1
Warehouses	5	42	6	13	6	72
Wood and coal yards	1	18	3	1	8	31
Croquet ground		1				1
Total	564	4, 217	290	289	311	5, 671

## SUMMARY BY LOCATION OF MISCELLANEOUS WATER TAKERS.

Location.	Houses supplied with Potomac water.		Miscellaneous water takers.	
	Number.	Per cent.	Number.	Per cent.
Georgetown	2, 104	0. 0525	564	0. 0985
Northwest section	22, 050	. 5512	4, 217	. 7437
Northeast section	6, 431	. 1608	290	. 0511
Southwest section	4, 779	. 1195	289	. 0509
Southeast section	4, 640	. 1180	311	. 0543
Total	40, 004		5, 671	



## REPORT OF THE SUPERINTENDENT OF LAMPS.

WASHINGTON, D. C., *July 26, 1895.*

SIR: I have the honor to submit the following report of the operations of the street-lighting department for the fiscal year ended June 30, 1895:

## NAPHTHA LIGHTING.

On October 1, 1894, all the lamps in the District formerly lighted with kerosene oil were changed to naphtha. A contract was entered into with Messrs. Nicolai Brothers for this system of lighting, whereby the lamps were burned from forty minutes after sunset until forty minutes before sunrise every night for the remainder of the year, a total of 3,828 hours per annum. In making contracts for this style of lighting in the future no reduction should be made in this number of hours. In alleys where it is always dark, whether the moon is shining or not, naphtha lamps are of great benefit, since under the present circumstances they can be burned longer than gas and every night as well. An increase in the number of these lamps is most urgently desired. Many of the alleys in the city are without light. All the principal roads leading into Washington should be lighted, and on those roads where there are a few lights the lighting should be extended to the District line. Many of the suburbs have no lamps, notably Benning, Langdon, Ivy City, and Twining City. All these places should be lighted. An addition of 650 naphtha lamps would no more than meet the present needs. This system of lighting is now very satisfactory and can be advantageously extended.

During the year all the lanterns inside the city limits formerly used for oil lighting were thoroughly cleaned and given two coats of white paint on the inside. These lanterns, 750 in number, should be replaced at as early a date as possible by new ones. They have been in use for many years, are worn out and loose at the joints, are wholly unadapted for naphtha lighting, and are unfit for gas lighting.

## GAS LIGHTING.

An important change should be made in the number of hours of gas lighting, beginning with the fiscal year 1897. The present schedule of 3,000 hours should be abandoned and the moon not be relied upon to furnish any portion of the light for the city. The number of hours of total darkness during the year, from the end of twilight in the evening to the beginning of twilight in the morning, is alone 3,116 hours. As all the lamps should burn at least one hour each night in addition, and as another hour each night is allowed the gas companies for lighting, making a total of 3,846 hours, an uncertain twilight and an unreliable moon are called upon to furnish approximately 850 hours of lighting, an average of 71 hours per month. It is a matter of the greatest difficulty to so use the moon that the 3,000 hours required by Congress will not be exceeded. Even on the brightest moonlight nights many of the streets are in absolute darkness, the dense heavy foliage of the trees completely overshadowing the streets. In the populous and dangerous alleys, too, where gas lamps are used and into which the moon only shines when about on the meridian, the darkness is intense. I would recommend that a uniform schedule of 3,828 hours per annum be adopted for all kinds of lighting—naphtha, gas, and electric.

In many of the suburbs improvements are going on rapidly, but there are not sufficient funds for establishing new lights. A few will be put up during the next fiscal year where they are absolutely needed, but in order to do so lights in other parts of the city will have to be discontinued. There are locations throughout the city and in the suburbs where fully 380 new gas lamps are absolutely needed.

During September and October, 1894, nightly tests were made of the consumption of gas in each lamp throughout a large portion of the city. Wherever burners were found using less than 6 cubic feet per hour the gas companies changed them upon notification.

In October, 1894, the Baltimore and Ohio Railroad Company substituted electric arc lamps for the gas and naphtha lamps along its tracks, thereby giving a better service, with no expense to the District.

One hundred and twenty old lanterns that were entirely worn out were replaced with new ones. A great many more lanterns, the majority of which have been in service for over ten years, should be replaced with new ones. It is not possible to make this substitution this next year, but in the estimates for the year 1897 an item to cover this expense is included.

## STREET DESIGNATIONS.

One hundred and five corners where designations had not before been placed have been equipped with street signs. Three hundred and forty painted glass street



signs, placed on lamps by the gas companies since July, 1894, have been replaced by these companies with blown glass ones similar to those furnished by the District. Forty painted glass signs put up a number of years ago by the District have also been replaced with blown glass ones. Forty-five signs on both First street east and First street west, which had been so made that it was almost impossible to tell whether they were intended for First street or I street, have been replaced with those of an approved pattern.

There are about 600 signs broken and missing annually, the greater part resulting from the insecure frames in use. These frames are of iron and so poorly designed that unless the glass is of a certain thickness it can not be put in or, being too thin, will not stay in. It would be a great saving and insure a better service if these frames were replaced with new copper ones properly designed to retain the glass, even if broken. All new corners are being equipped with such frames.

On Pennsylvania avenue NW., from Third to Twenty-first streets, a new pattern of enameled designations has been placed on most of the corners. These signs are similar in design to those in use in Paris. They have been placed, where possible, on a level with the second-story windows of the buildings. One hundred have been put up as an experiment, but the prevailing opinion seems to be that they are placed too high and are indistinct. They are of such size, however, that they could not well be placed lower. It is possible to use such signs on the buildings only on the line of the electric lights and where there is no parking.

#### ELECTRIC LIGHTING.

The only changes in the electric-lighting service has been the addition of seven arc lamps on H street NW., between North Capitol and First streets along the line of the Columbia Cable Railroad, and one on the north side of Washington Circle. Three lights discontinued in May, 1894, for want of funds were relighted in July, 1894. The addition of arc lights along the line of the above-mentioned railroad from Fourteenth street and New York avenue NW. to H and Fifteenth streets NE. is most urgently needed. The line of the Metropolitan Electric Railway from Four-and-a-half and P streets SW. to Ninth street and Florida avenue NW. should also be lighted by arc lamps. This road will be in full operation by August 1, 1895, and will be a rapid-transit line and therefore dangerous. The east and west lines of the same company, which Congress has ordered changed to underground electric, will be in full operation when the next appropriation is made and available for street lighting, and provision should be made for establishing arc lamps on those lines also.

Arc lamps should be placed on Eighth street SE. from Pennsylvania avenue to the Navy-Yard, and on First street NW. from the Peace Monument to the Baltimore and Ohio Railroad depot. Cable lines run on these streets and it is absolutely necessary that they should be lighted better than at present.

During the months of March, April, May, and June, 1895, nightly tests with photometer and voltmeter were made of the candlepower and voltage of about one-half of the arc lamps. These tests were made in the street while the lamps were in use, and showed, in all but a few instances, that they were up to the requirements of the appropriation act. Simultaneous readings were made of the volts across the arc, and of the candlepower as indicated by the photometer, the readings being taken on each lamp. The record of the current was obtained from a recording ampere meter placed in the circuit under test at the electric-light station. Comparative readings of the candlepower and wattage were thus obtained, but these varied greatly in themselves, and although satisfactory as far as they went, are not to be recommended in making regular tests. As readings were desired without the globes, which in many cases are of ground glass and porcelain, the arc was exposed to the action of the slightest breeze and steady readings for any length of time rendered impossible.

The recording ampere meter mentioned above has proved very satisfactory, and in every circuit in which it has been placed has shown that the current for that night was maintained constant. It would be desirable to have one such meter for every circuit. The electric-lighting service has been well maintained throughout the year, with very few interruptions, and those of but short duration.

#### INTENDED OPERATIONS FOR THE FISCAL YEAR 1896.

Bids were opened June 3, 1895, for street lighting for 1896. The rate for gas lamps, \$20.50 per annum, remains as heretofore, the propositions submitted by the Washington and the Georgetown gas companies being not accepted. The lowest bidder for naphtha lighting was the Pennsylvania Globe Gas Light Company, of Philadelphia, their bid being \$20.25 per lamp per annum. The increase in the price of naphtha lighting from \$17 to \$20.25 and the necessity of increasing the number of such lamps to 1,000, as called for in the specifications of the contract, will materially affect the extension of the street-lighting service.

It is intended to discontinue 24 gas lamps on the north side of Pennsylvania avenue, between Second and Eleventh streets SE., and 1 on Eleventh street, near Pennsylvania avenue. There are 13 electric lights on the south side of the avenue, between the streets named, which are sufficient to light that avenue. To make up the 1,000 naphtha lamps, there being but 868 under the former contract, it will be necessary to change at least 132 gas lamps to naphtha. These lamps will be taken from Bladensburg road, from the outlying sections of the city, and from the alleys. To meet the pressing demand for lights in new localities, every other naphtha lamp on Benning's road will be discontinued and erected elsewhere as needed. Discontinuing the above-mentioned gas lamps on Pennsylvania avenue will enable the department to erect new gas lamps in a few sections where improvements are going on rapidly and lights are necessary.

Beyond this readjustment of the lighting service, no material changes can be made this fiscal year. With the appropriation for gas and naphtha the same as for the year 1895, and with the increase of \$3.25 per lamp for 1,000 naphtha lamps, there will be just sufficient funds to maintain the present service.

There is great need of a clerk in this office who at the same time shall be an assistant to the superintendent. Whenever it is necessary for the latter to have the assistance of some one during the day—and such occasions arise daily—he is compelled to call upon one of the inspectors, taking him from his regular nightly inspection. Another one of the inspectors devotes from three to four hours a day in the office, making out the daily reports and doing other clerical work which the superintendent has not time for. No regular systematic inspection can be carried on with such interruptions. There are but three inspectors provided for by Congress, one of whom gives his entire time to the naphtha lamps, leaving two men to cover the entire District. Out of the appropriation for electric lighting sufficient money is set aside to pay one inspector, whose duties are divided between the electric lights and clerical work. At least one additional inspector should be allowed. A great deal more work could be accomplished and the records of the office kept as they should be were these two additional men provided for.

It is also to be earnestly hoped that the Commissioners will continue to urge upon Congress the necessity of increasing the salary of the superintendent of lamps. This position is one of great responsibility and one that demands his time both day and night, Sundays and holidays. He must not only look after the general business of the department and perform the greater part of the clerical work, but also must be occupied with all the minor details. It seems no more than just that the increase asked for should be granted.

The following table shows the number of lamps of all kinds in use on the 1st day of July, 1895, as compared with the 1st day of July, 1894:

	1894.	1895.
Gas.....	6,246	6,188
Oil (changed October, 1894, to naphtha).....	747	868
Electric.....	327	338
Total.....	7,320	7,394

Total increase during the year, 74.

The changes have been as follows:

	Added.	Discontinued.
Gas lamps.....	21	79
Naphtha lamps.....	139	18
Electric (3 relighted).....	11	.....
Total.....	171	97

Total increase during the year, 74.

Number of gas lamps erected, 70; number of these lighted, 14; number of posts removed and reerected, 63; number of posts disconnected and taken down, 39; number broken down by runaways and reerected, 13; number of electric lights moved, 1.

WALTER C. ALLEN,  
Superintendent of Lamps.

Maj. CHAS. F. POWELL,  
Engineer Commissioner, District of Columbia.



## REPORT OF THE INSPECTOR OF GAS AND METERS.

## GAS SUPPLY.

The illuminating power of the gas supplied by the Washington Gas Light Company during the year ended June 23, 1895, was, by average of the photometric tests made at the old Post Building, Southeast, and Northwest laboratories, found to equal 19.63 standard candles.

This is an increase of 1.61 candles over the average obtained during the year ended June 23, 1894. The highest candle-power was found at the Southeast laboratory, corner Fifth and D streets. The average illuminating power of the gas tested at that station was 20.43 candles, which is an increase of 1.33 candles over the average candle-power obtained at the old Post Building laboratory and 1.05 candles over the average found at the Northwest laboratory.

No defaults occurred in the illuminating power and purity standards. The impurity known as sulphureted hydrogen has been present on many occasions during the past year in the gas supplied by the Washington Gas Light Company, inspected at the laboratory 1335 Fourteenth street NW. and old Post Building laboratory, corner Tenth and D streets NW., and on several occasions this impurity has been found in the gas tested at the laboratory Fifth and D streets SE.

Sulphureted hydrogen should not exist in purified gas supplied to consumers, it being the most offensive and deleterious of all the sulphur compounds found in illuminating gas. The recommendation made in the last annual report of this office that this impurity be included with the other impurities under supervision, as provided for in section 2 of an act regulating gas works approved June 23, 1874, is again renewed.

The illuminating power of the gas supplied by the Georgetown Gas Light Company during the year ended June 23, 1895, averaged 16.97 standard candles. This is practically the same candle-power found during the previous year. Six defaults in the illuminating power occurred, but they were slight deviations from the standard; only in one instance did the default amount to 0.53 of one candle. This loss of light in a flame consuming 5 cubic feet per hour would hardly be noticeable.

On eight occasions the quantity of ammonia found in this company's gas exceeded the 5 grains allowed. The large quantity of this impurity present, from the 6th to the 15th of May, was owing to the fact that the scrubbers, an apparatus used for washing gas, had to be dismantled for repairs, and as soon as the scrubbers were again in working order the ammonia was brought within the limits allowed. These deviations were unavoidable.

The unusually large number of defaults of excess of sulphur found in the gas supplied by this company during the past year, namely, twenty-nine, was, I think, owing to the purifying apparatus "used in freeing gas, to a limited extent, of the sulphur compounds contained therein" not being of sufficient capacity for efficiently performing the work required, or it was owing to the use of coal containing an unusually large quantity of sulphur. The latter cause, I know, did exist last spring, and I have no doubt that the defaults which have occurred recently may be attributable to the same cause.

As it is essential that the standard of purity established by law for illuminating gas manufactured in this District be complied with, I would suggest that the Georgetown Gas Light Company be required, at as early a day as practicable, to either provide a coal for manufacturing gas which their purifying apparatus will remove the sulphur from within the limits prescribed, or enlarge the purifying capacity of their plant so as to be able to furnish gas under all ordinary conditions and circumstances that will in every respect be in conformity with the requirements of the act of Congress regulating gas works in the District of Columbia.

## INSPECTION AND PROVING OF METERS.

Two thousand seven hundred and thirteen meters were inspected and proved by this office from June 24, 1894, to June 23, 1895. With the exception of six meters inspected and proved for the Alexandria Gas Works, the above number was inspected and proved for the Washington and Georgetown Gas Light companies and for consumers of gas in Washington and Georgetown. The results of inspection were as follows:

Two hundred and forty-nine registered fast; average error, 4.20 per cent. Sixty-one registered slow; average error, 4.63 per cent. Two thousand three hundred and ninety-four registered within the limits allowed by law, namely, 2 per cent either way, and three did not register the gas flowing through them. Five hundred and ninety-one of the above-described meters were ordered out and inspected and proved on complaint. Five hundred and eighty were complained of by consumers of gas,

they believing them to be wrong. Of this number two hundred and thirty-eight registered fast against the consumer; average error, 4.43 per cent. Fifty-nine registered slow against the companies; average error, 4.96 per cent. Two hundred and eighty registered within the limits allowed by law, and three did not register the gas flowing through them. Eleven meters were complained of by the gas companies. Of this number three registered fast; average error, 4.10 per cent. One registered slow, 4.33 per cent; and seven registered within the limits allowed.

#### FEEES COLLECTED FOR METER INSPECTIONS.

The sum of \$882.80 was collected for meters inspected from June 24, 1894, to June 23, 1895, and paid to the collector of the District of Columbia, to be placed to the credit of the United States and District of Columbia in equal parts.

I respectfully renew the recommendation made in previous annual report, that a penalty clause should be added to the provisions of the act of March 3, 1893, entitled "An act making appropriations for the expenses of the government of the District of Columbia for the fiscal year ending June thirtieth, eighteen hundred and ninety-four, and for other purposes," in so far as the said act applies to the placing in service of meters from which the heads shall have been removed by any gas company in the District of Columbia for the purpose of examining and repairing the same, and no gas meter from which the head shall have been removed shall be again placed in service by any gas company in the District of Columbia without having been duly inspected, proved, and sealed, as provided for in the said act.

Several cases have been reported to this office by consumers of gas where meters of the kind referred to in the act of Congress just cited were placed in service by the Washington Gas Light Company without having been inspected, proved, and sealed by this office, as required by law. In each instance the company was promptly notified by the inspector and request made that the unbadged meter be removed and that a meter which had been inspected, proved, and sealed be put in service, which demand was complied with in each case.

I would further recommend that the Washington Gas Light Company be required to send to this office all meters that they remove from consumers' premises, for the purpose of test, to ascertain whether the meter is registering too slow. There is quite a large number of meters removed for this object, and the inspector's office is the proper place where the meter should be brought for inspection, to determine the accuracy with which it registers gas, and not the company's shops, as is the custom at present.

The recommendations made in the annual report of this office for the year ended June 30, 1894, that a suitable person be appointed to perform clerical services and assist generally in the work required to be performed in the laboratories and that the salary of the messenger be increased from \$480 to \$600 per annum are again renewed.

S. CALVERT FORD,  
*Inspector of Gas and Meters.*

To the COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

#### ILLUMINATING POWER AND PURITY.

*Photometric and purity tests of gas furnished by the Washington Gas Light Company, in the old Post Building laboratory.*

##### Illuminating power during the year:

Average .....	candles..	19.10
Highest .....	do....	21.81
Lowest .....	do....	16.38

December 5, 1894, the highest illuminating power was found.

April 12, 1895, the lowest illuminating power was found.

##### Ammonia in each 100 cubic feet:

Average .....	grains..	1.21
Highest .....	do....	4.42
Lowest .....	do....	.11

July 28, 1894, the highest quantity of ammonia was found.

February 25 and 27, 1895, the lowest quantity of ammonia was found.

##### Sulphur in each 100 cubic feet:

Average .....	grains..	5.31
Highest .....	do....	11.81
Lowest .....	do....	2.56

August 18, 1894, the highest quantity of sulphur was found.

December 3, 1894, the lowest quantity of sulphur was found.

*Photometric and purity tests of gas furnished by the Washington Gas Light Company, in the laboratory corner Fifth and D streets SE.*

**Illuminating power during the year:**

Average.....	candles..	20.43
Highest.....	do.....	23.80
Lowest.....	do.....	17.20

December 26, 1894, the highest illuminating power was found.

April 12, 1895, the lowest illuminating power was found.

**Ammonia in each 100 cubic feet:**

Average.....	grains..	1.10
Highest.....	do.....	2.55
Lowest.....	do.....	.34

September 11, 1894, the highest quantity of ammonia was found.

February 7, 1895, the lowest quantity of ammonia was found.

**Sulphur in each 100 cubic feet:**

Average.....	grains..	4.85
Highest.....	do.....	8.51
Lowest.....	do.....	1.78

July 19, 1894, the highest quantity of sulphur was found.

June 11, 1895, the lowest quantity of sulphur was found.

*Photometric tests of gas furnished by the Washington Gas Light Company, in the Northwest laboratory, 1335 Fourteenth street NW.*

**Illuminating power during the year:**

Average.....	candles..	19.38
Highest.....	do.....	21.93
Lowest.....	do.....	16.23

December 29, 1894, the highest illuminating power was found.

June 25, 1894, the lowest illuminating power was found.

**RECAPITULATION.**

**At three laboratories:**

Average mean illuminating power.....	candles..	19.63
Average maximum illuminating power.....	do.....	22.51
Average minimum illuminating power.....	do.....	16.60

**At two laboratories:**

Average mean quantity of ammonia.....	grains..	1.15
Average maximum quantity of ammonia.....	do.....	3.48
Average minimum quantity of ammonia.....	do.....	.22
Average mean quantity of sulphur.....	do.....	5.08
Average maximum quantity of sulphur.....	do.....	10.16
Average minimum quantity of sulphur.....	do.....	2.17

*Illuminating power and purity of gas supplied by the Georgetown Gas Light Company, in laboratory, 1338 Thirty-second street NW.*

**Illuminating power during the year:**

Average.....	candles..	16.97
Highest.....	do.....	20.43
Lowest.....	do.....	15.47

April 29, 1895, the highest illuminating power was found.

October 13, 1894, the lowest illuminating power was found.

**Ammonia in each 100 cubic feet:**

Average.....	grains..	2.97
Highest.....	do.....	30.48
Lowest.....	do.....	.96

May 8, 1895, the highest quantity of ammonia was found.

December 7, 1894, the lowest quantity of ammonia was found.

**Sulphur in each 100 cubic feet:**

Average.....	grains..	18.47
Highest.....	do.....	31.50
Lowest.....	do.....	12.36

April 10, 1895, the highest quantity of sulphur was found.

October, 8, 1894, the lowest quantity of sulphur was found.



## DEFAULTS IN ILLUMINATING POWER AND PURITY.

On six occasions the illuminating power of the gas furnished by the Georgetown Gas Light Company was found to be less than sixteen candles. On eight occasions the quantity of ammonia found exceeded the 5 grains allowed. On twenty-nine occasions the quantity of sulphur found exceeded the 20 grains allowed.

## SPECIFIC GRAVITY.

The specific gravity of the gas furnished by the Washington Gas Light Company was as follows:

Average at three laboratories:

Mean .....	0.625
Maximum .....	.637
Minimum .....	.611

The specific gravity of the gas furnished by the Georgetown Gas Light Company was as follows:

Mean .....	0.447
Highest .....	.492
Lowest .....	.432

## PRESSURE OF THE GAS.

The pressure of the gas supplied by the Washington Gas Light Company, as recorded in the old Post Building, Southeast, and Northwest laboratories, was as follows:

Mean .....	inches..	1.79
Maximum .....	do .....	2.61
Minimum .....	do .....	1.18

The pressure of the gas supplied by the Georgetown Gas Light Company, as recorded in laboratory No. 1338 Thirty-second street NW., was as follows:

Mean .....	inches..	1.64
Maximum .....	do .....	2.83
Minimum .....	do .....	.95

*Report of the illuminating power and purity of the gas supplied by the Washington Gas Light Company from June 24, 1894, to June 23, 1895.*

[As determined in the old Post Building laboratory, Tenth and D streets NW.]

[Each observation consists of twenty readings on the Bunsen photometer, at intervals of one minute.]

Month.	Number of observations.	Illuminating power, in sperm candles.			Quantity of ammonia in 100 cubic feet.			Quantity of sulphur in 100 cubic feet.		
		Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.
July .....	24	19.09	20.64	18.01	<i>Grains.</i> 3.20	<i>Grains.</i> 4.40	<i>Grains.</i> 1.87	<i>Grains.</i> 7.50	<i>Grains.</i> 10.30	<i>Grains.</i> 5.49
August .....	27	19.11	20.52	17.50	2.84	4.42	1.70	5.77	11.81	3.66
September .....	25	18.87	20.03	17.16	2.97	4.42	1.87	5.34	7.96	4.05
October .....	26	19.51	20.94	16.87	.97	2.21	.55	5.12	6.66	2.95
November .....	27	20.40	21.61	19.34	.50	.79	.34	4.22	5.40	3.20
December .....	24	20.24	21.81	17.53	.54	.85	.39	4.20	8.08	2.56
January .....	23	19.86	21.08	17.81	.65	.96	.34	4.36	5.88	3.48
February .....	26	19.36	20.60	17.33	.36	.56	.17	5.70	10.76	3.29
March .....	24	18.94	20.92	17.97	.42	.68	.11	5.03	6.04	4.12
April .....	26	18.02	20.33	16.38	.59	1.41	.28	5.48	7.37	3.16
May .....	26	18.02	19.53	16.45	.72	1.24	.45	5.36	6.68	3.77
June .....	24	17.81	18.90	17.11	.69	.96	.45	5.75	6.68	4.80
Total ...	302	229.23			14.54			63.83		

## AVERAGE FOR THE YEAR.

Illuminating power, in sperm candles:

Mean of 302 observations .....	19.10
Highest (December 5, 1894) .....	21.81
Lowest (April 12, 1895) .....	16.38

Quantity of ammonia in 100 cubic feet:

Mean .....	grains..	1.21
Highest (July 28, 1894) .....	do .....	4.42
Lowest (February 25 and 27, 1895) .....	do .....	.11

Quantity of sulphur in 100 cubic feet:

Mean .....	do .....	5.31
Highest (August 18, 1894) .....	do .....	11.81
Lowest (December 3, 1894) .....	do .....	2.58

[As determined in laboratory, corner Fifth and D streets SE.]

[Each observation consists of twenty readings on the Bunsen photometer, at intervals of one minute.]

Month.	Number of observations.	Illuminating power, in sperm candles.			Quantity of ammonia in 100 cubic feet.			Quantity of sulphur in 100 cubic feet.		
		Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.
July.....	24	20.06	22.07	18.17	<i>Grains.</i>	<i>Grains.</i>	<i>Grains.</i>	<i>Grains.</i>	<i>Grains.</i>	<i>Grains.</i>
August.....	27	19.85	21.50	18.25	.88	1.53	.34	7.40	8.51	6.50
September.....	25	20.68	23.05	18.78	.80	1.36	.34	6.08	8.24	4.39
October.....	26	20.89	23.01	19.35	1.40	2.55	.51	5.46	6.45	4.74
November.....	27	21.31	22.73	19.06	.92	2.21	.42	5.33	8.24	3.43
December.....	23	21.51	23.01	18.97	1.02	1.19	.51	4.37	5.35	3.02
January.....	23	21.31	23.80	19.79	1.07	1.70	.68	4.13	4.80	3.43
February.....	26	20.09	21.67	18.47	1.45	2.04	.68	4.32	6.18	3.57
March.....	24	19.96	21.70	18.59	.75	1.02	.34	4.97	6.59	2.74
April.....	26	19.04	20.75	17.20	1.19	1.70	.85	5.23	6.87	3.57
May.....	26	20.40	21.57	19.88	1.58	2.04	1.02	4.73	6.59	3.43
June.....	24	20.10	22.39	18.18	1.05	1.70	.62	3.14	4.53	2.38
June.....	24	20.10	22.39	18.18	1.17	1.53	.85	3.07	4.80	1.78
Total...	301	245.20	-----	-----	13.28	-----	-----	58.23	-----	-----

## AVERAGE FOR THE YEAR.

Illuminating power, in sperm candles:	
Mean of 301 observations.....	20.43
Highest (December 26, 1894).....	23.80
Lowest (April 12, 1895).....	17.20
Quantity of ammonia in 100 cubic feet:	
Mean.....	<i>grains.</i> 1.10
Highest (September 11, 1895).....	do. 2.55
Lowest (July 6 and August 7, 1894, and February 7, 1895).....	do. .34
Quantity of sulphur in 100 cubic feet:	
Mean.....	do. 4.85
Highest (July 19, 1894).....	do. 8.51
Lowest (June 11, 1894).....	do. 1.78

[As determined in laboratory, 1335 Fourteenth street NW.]

[Each observation consists of twenty readings on the Bunsen photometer, at intervals of one minute.]

Month.	Number of observations.	Illuminating power, in sperm candles.		
		Mean.	Highest.	Lowest.
July.....	24	18.08	19.36	16.23
August.....	27	20.20	21.09	18.64
September.....	24	18.94	21.24	18.97
October.....	26	19.44	20.86	18.52
November.....	27	19.52	20.94	17.94
December.....	24	19.13	20.66	17.43
January.....	23	19.88	21.93	17.96
February.....	26	20.01	21.40	18.46
March.....	24	20.56	21.78	19.55
April.....	26	18.99	20.18	18.11
May.....	26	19.05	21.45	17.19
June.....	24	18.76	20.22	17.52
Total.....	301	232.56	-----	-----

## AVERAGE FOR THE YEAR.

Illuminating power, in sperm candles:	
Mean of 301 observations.....	19.38
Highest (December 29, 1894).....	21.93
Lowest (June 25, 1894).....	16.23

*Report of the illuminating power and purity of the gas supplied by the Georgetown Gas Light Company, from June 22, 1894, to June 23, 1895.*

[As determined in laboratory, 1338 Thirty-second street, NW.]

[Each observation consists of twenty readings on the Bunsen photometer, at intervals of one minute.]

Month.	Number of observations.	Illuminating power in sperm candles.			Quantity of ammonia in 100 cubic feet.			Quantity of sulphur in 100 cubic feet.		
		Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.
July.....	24	17.27	19.45	16.22	<i>Grains.</i> 3.34	<i>Grains.</i> 3.91	<i>Grains.</i> 2.85	<i>Grains.</i> 18.35	<i>Grains.</i> 19.89	<i>Grains.</i> 16.48
August.....	27	17.15	19.76	16.17	3.75	4.25	3.23	16.62	18.89	12.74
September.....	25	17.17	18.28	16.13	4.49	5.84	3.51	16.23	18.41	15.06
October.....	26	16.70	18.18	15.47	2.57	4	1.70	15.90	19	12.36
November.....	27	16.74	18.21	16.02	1.60	2.35	1.19	17.30	20.51	15.77
December.....	23	16.54	19.02	16	1.37	1.64	.96	18.33	27.87	13.79
January.....	23	16.69	18.93	15.50	1.38	1.94	1.09	18.79	23.06	16.79
February.....	26	16.54	17.79	15.93	1.94	2.43	1.33	18.70	21.52	16.02
March.....	24	17.12	18.67	16.06	1.94	2.83	1.30	21.06	27.48	17.05
April.....	26	17.11	19.17	15.99	1.46	1.81	1.19	21.67	31.50	14.36
May.....	26	17.81	20.43	16.35	9.29	30.48	1.98	17.73	24.01	14.35
June.....	24	16.89	18.40	16.02	2.61	3.26	1.83	20.89	30.45	15.97
Total...	301	203.73	.....	.....	35.74	.....	.....	221.66	.....	.....

AVERAGE FOR THE YEAR.

Illuminating power, in sperm candles:	
Mean of 301 observations.....	16.97
Highest (April 29, 1895).....	20.43
Lowest (October 13, 1894).....	15.47
Quantity of ammonia in 100 cubic feet:	
Mean.....	<i>grains.</i> 2.97
Highest (May 8, 1895).....	<i>do.</i> 30.48
Lowest (December 7, 1894).....	<i>do.</i> .96
Quantity of sulphur in 100 cubic feet:	
Mean.....	<i>do.</i> 18.47
Highest (April 10, 1895).....	<i>do.</i> 31.50
Lowest (October 8, 1894).....	<i>do.</i> 12.36

On six occasions the illuminating power of the gas was less than 16 candles.

On eight occasions the quantity of ammonia was in excess of the 5 grains allowed.

On twenty-nine occasions the quantity of sulphur found exceeded the 20 grains allowed.

*Report showing the pressure of the gas supplied by the Washington Gas Light Company, as registered in this office, old Post Building, corner Tenth and D streets, from July 1, 1894, to June 30, 1895.*

Month.	Mean.	Maximum.	Minimum.
	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>
July.....	1.53	2.12	1.11
August.....	1.45	1.91	1.15
September.....	1.44	1.85	.99
October.....	1.52	1.95	1.17
November.....	1.61	2.27	1.24
December.....	1.65	2.11	1.27
January.....	1.64	2.18	1.25
February.....	1.66	2.27	1.24
March.....	1.54	2.25	1.15
April.....	1.49	2.01	1.13
May.....	1.45	2.07	1.01
June.....	1.45	1.97	1

Average mean pressure.....	<i>inches.</i> 1.58
Maximum pressure (November 29, 1894, and February 22, 1895).....	<i>do.</i> 2.27
Minimum pressure (September 12, 1894).....	<i>do.</i> .99

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*Report showing the pressure of the gas supplied by the Washington Gas Light Company, as registered in this office, corner Fifth and D streets SE., from July 1, 1894, to June 30, 1895.*

Month.	Mean.	Maximum.	Minimum.
	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>
July.....	1.89	2.47	1.60
August.....	1.84	2.15	1.65
September.....	1.83	2.36	1.58
October.....	1.98	2.32	1.79
November.....	2.11	2.64	1.75
December.....	2.18	2.76	1.77
January.....	2.14	2.63	1.75
February.....	2.38	3.18	1.85
March.....	2.33	3.18	1.82
April.....	2.30	2.88	1.77
May.....	2.13	2.79	1.64
June.....	2.05	2.57	1.62

Average mean pressure.....inches.. 2.09  
 Maximum pressure (April 20, 1895).....do.... 2.88  
 Minimum pressure (September 12, 1894).....do.... 1.38

*Report showing the pressure of the gas supplied by the Washington Gas Light Company, as registered in this office, Northwest Station, 1335 Fourteenth street NW., from July 1, 1894, to June 30, 1895.*

Month.	Mean.	Maximum.	Minimum.
	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>
July.....	1.83	2.35	1.45
August.....	1.73	2.30	1.40
September.....	1.70	2.15	1.21
October.....	1.76	2.17	1.44
November.....	1.81	2.60	.91
December.....	1.84	2.34	1.41
January.....	1.83	2.38	1.43
February.....	1.89	2.58	1.45
March.....	1.76	2.70	1.31
April.....	1.72	2.32	1.35
May.....	1.66	2.27	1.23
June.....	1.68	2.25	1.17

Average mean pressure.....inches.. 1.76  
 Maximum pressure (March 3, 1895).....do.... 2.70  
 Minimum pressure (June 2, 1895).....do.... 1.17

*Report showing the pressure of the gas supplied by the Georgetown Gas Light Company, as registered in this office, 1338 Thirty-second street NW., from July 1, 1894, to June 30, 1895.*

Month.	Mean.	Maximum.	Minimum.
	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>
July.....	1.68	3.21	0.76
August.....	1.65	3.45	1.05
September.....	1.60	3.44	1.08
October.....	1.49	1.99	1.00
November.....	1.70	2.54	.97
December.....	1.67	2.67	.80
January.....	1.65	2.63	.99
February.....	1.74	2.52	1.08
March.....	1.73	2.71	1.09
April.....	1.64	2.95	.80
May.....	1.64	3.53	.90
June.....	1.60	2.40	.88

Average mean pressure.....inches.. 1.64  
 Maximum pressure (May 6, 1895).....do.... 3.53  
 Minimum pressure (July 17, 1894).....do.... .76

*Report of meters inspected and proved for the Georgetown Gas Light Company and for consumers of gas in Georgetown, from June 24, 1894, to June 23, 1895.*

Month.	Meters test- ed.	New me- ters for com- pany.		Repaired meters for company.		Consumers' meters on complaint of consumers.							Consumers' meters on complaint of company.	
		To- tal.	Cor- rect.	Total.	Cor- rect.	To- tal.	Fast.		Slow.		Cor- rect.	Total.	Cor- rect.	
							No.	Per cent.	No.	Per cent.				
July .....	25	1	1	19	19	5	4	3.30			1			
August .....	16	12	12	1	1	2					2	1	1	
September .....	5					5	1	4.33			4			
October .....	43	36	36			6	1	3.66	1	7.33	4	1	1	
November .....	47	24	24	15	15	8	2	4.25	1	3.50	5			
December .....	9					9	5	5.79			4			
January .....	33	12	12	12	12	9	7	5.47			2			
February .....	30	1	1	15	15	14	9	4.55			5			
March .....	6					5	1	3.83	1	6.33	3	1	1	
April .....	1					1			1	4.00				
May .....	6					6	3	3.66	1	3.33	2			
June .....	1					1					1			
Total .....	222	86	86	62	62	71	33	4.31	5	4.85	33	3	3	

<sup>1</sup> Average.

Of the 222 meters inspected and proved for the Georgetown Gas Light Company and for consumers of gas in Georgetown, 33 registered fast; average error, 4.31 per cent; 5 registered slow; average error, 4.85 per cent, and 184 registered within the limits allowed by law, namely, 2 per cent either way.

*Report of meters inspected and proved for the Washington Gas Light Company and for consumers of gas in Washington, from June 22, 1894, to June 23, 1895.*

Month.	Meters tested.	New meters for company.				Repaired meters for company.							
		Total.	Fast.		Cor-rect.	Total.	Fast.		Slow.		Cor-rect.		
			No.	P. ct.			No.	P. ct.					
July .....	133	2			2	115	1	3.33			1	3.83	114
August .....	171					158							157
September .....	174					162	1	3					161
October .....	240	111			111	102							102
November .....	241	93	1	5	92	110							110
December .....	324	154			154	92							92
January .....	186	77			77	59							59
February .....	220	1			1	80							80
March .....	203	15			15	135	2	3.99					133
April .....	217	3	1	3.12	2	172	1	4					171
May .....	202					178	1	4					177
June .....	174					149							149
Total .....	2,485	456	2	4.06	454	1,512	6	13.66	1	3.83			1,506

Month.	Consumers' meters on complaint of consumers.				Consumers' meters on complaint of company.				Consumers' meters on complaint of company that did not register.			
	Total.	Fast.		Slow.	Cor-rect.	Total.	Fast.			Slow.	Cor-rect.	
		No.	P. ct.				No.	P. ct.				
July .....	14	6	3.77		8	2				2		
August .....	13	2	5.41	1	4.16	10						
September .....	12	2	4.49	4	3.99	6						
October .....	26	9	3.77	4	4.58	13	1	4.66				
November .....	37	14	4.01	5	9.91	17	1		1	4.33		21
December .....	78	33	4.83	13	5.44	32						
January .....	49	20	4.81	1	3.66	27	1				1	21
February .....	138	67	5.09	16	6.08	54	1	4.33				21
March .....	51	21	5.16	3	4.60	27	2	3.33			1	
April .....	42	20	5	3	5.61	19						
May .....	24	6	4.26	1	3.83	17						
June .....	25	5	4.19	3	3.99	17						
Total .....	509	205	4.56	54	5.07	247	8	3 4.10	1	4.33	4	23

<sup>1</sup> Average.

<sup>2</sup> Consumers' complaint.

Two thousand four hundred and eighty-five meters were inspected and proved for the Washington Gas Light Company and for consumers of gas in Washington. Of this number 216 registered fast, average error, 4.09 per cent; 56 registered slow, average error, 4.41 per cent; 2,210 registered within the limits allowed by law, namely, 2 per cent either way, and 3 meters did not register the gas flowing through them.

Six meters were tested for the Alexandria Gas Works.



## DIVISION OF SEWERS AND PLUMBING.

*Supervision of sewers, examination of plans for plumbing and inspection of plumbing work, supervision of permit office, inspection of engineering materials and care of engineering property.*

Capt. LANSING H. BEACH,  
*Corps of Engineers, United States Army, Assistant to Engineer Commissioner, in charge.*

D. E. McCOMB,  
*Superintendent of Sewers.*

H. M. WOODWARD,  
*Permit Clerk.*

CHARLES B. BALL,  
*Inspector of Plumbing.*

L. T. BOISEAU,  
*Superintendent of Property.*

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### REPORT OF ASSISTANT IN CHARGE.

WASHINGTON, D. C., July 31, 1895.

MAJOR: I have to submit the following report of the operations of the different departments of the division of sewers and plumbing during the fiscal year ended June 30, 1895:

#### SEWER DEPARTMENT.

The accompanying report of Mr. McComb, with its tables, gives an itemized statement of what was accomplished in this department during the past year, but to permit comparisons in cost between present and future work, as well as to enable persons not already familiar with sewer construction in the District of Columbia to understand the work done, it has been considered advisable to give here a description of the engineering features involved, the methods in use, with the reasons therefor, and the system of property and material accountability.

The portion of the city of Washington west of North Capitol and South Capitol streets varies in altitude from about 5 or 6 feet to a little over 120 feet above tide, sloping abruptly to Rock Creek on the west and gently toward the Potomac on the south; east of the Capitol is a plateau about 75 feet above tide sloping gently in all directions. Contours of 20 feet interval are shown on the accompanying map. Outside of the city the ground rises toward the north and west, reaching altitudes of 300 and 400 feet.

The soil in which sewers are laid varies greatly, from solid rock and disintegrated granitic rock on the west through the compacted gravel and hard clay of the heart of the city to the loose earth of filled up streets and the soft mud of the river front, most of the work being in the gravel and clay.

All sewer work exceeding \$1,000 in cost is required by law to be done by contract after advertisement. The effect of this is practically to cause all large brick or concrete sewers and the longer lines of pipe sewers to be built by contract, leaving only the shorter lines of pipe sewers to be constructed by hired labor. The contractor is required to use the cement, vitrified brick, invert blocks and pipe furnished by the District; other material he provides himself, subject to the Dis-

trict specifications for quality. On the smaller sewers the contract price is usually for the linear foot of completed sewer; on the largest sewers the contract is generally by the cubic yard of material in the sewer. All contractors are required to make eight hours a labor day. Inspectors are paid \$4 per day, the amount paid them being included in the cost of the sewer upon which they are engaged.

In all work done by hired labor the day is of eight hours, ordinarily from 7 a. m. to 12 m., and from 1 p. m. to 4 p. m., but in late fall and early spring, work begins at 7.30 a. m., with half-hour intermission at noon time. The wages paid are all by the day and are as follows: Foreman, \$4; laborers, first class, \$1.75; second class, \$1.50; masons and bricklayers, \$4; watchman, \$1.50; water boys, 50 cents; two-horse wagon, with driver, \$3.50; one-horse cart, with driver, \$1.75. The foreman is responsible for all tools belonging to the District used by his party, and for all material issued for use in construction of the sewer, and that all work is properly performed. The first-class laborers are generally those engaged at the bottom of the trench, where the throw is hardest, and in mixing and handling concrete.

The materials used in all sewers built by hired labor are purchased by the District in large quantities by contract and stored in the District property yards. The yards are five in number, adjacent to the railroads or water front, and each contains the material which can be placed in it with the least haul from the point of unloading, as a rule such hauls being less than 500 feet. The prices paid during the past year were as follows: Concrete sand, per cubic yard, 47 cents; screened sand for brickwork, per cubic yard, 69 cents; gravel, per cubic yard, 75 cents; sewer pipe, per foot, 6-inch,  $4\frac{1}{2}$  cents; 8-inch,  $6\frac{3}{4}$  cents; 10-inch, 10 cents; 12-inch,  $11\frac{1}{4}$  cents; 15-inch,  $18\frac{1}{2}$  cents; 18-inch,  $26\frac{1}{2}$  cents; 21-inch, 40 cents, and 24-inch, 49 cents; Y-branches, each, 30 cents, 41 cents, 46 cents, 75 cents, \$1.13, \$1.63, and \$2.08, respectively; invert block, per linear foot, 40 cents; vitrified sewer brick, per M, \$16.50; hard arch brick, per M, \$6; natural cement, per barrel, in sacks, 79 cents; in barrels, \$1; Portland cement, per barrel, in barrels, \$2.12.

Under these prices for material and labor the cost of the different size sewers per linear foot was, during the past year, as follows:

By hired labor, 8-inch pipe, \$1.18; 10-inch pipe, \$1.09; 12-inch pipe, \$1.25; 15-inch pipe, \$1.64; 18-inch pipe, \$1.86; 21-inch pipe, \$2.07; 24-inch pipe, \$2.81; 24 inch concrete, \$3.19; 2 by 3 feet, egg-shaped, \$5.27.

By contract, 15-inch pipe, \$1.76; 18 inch pipe, \$1.97; 21-inch pipe, \$2.19; 24-inch pipe, \$2.60; 2 by 3 feet, egg-shaped, \$4.68; 2.25 by 3.375 feet, egg-shaped, \$5.53; 2.5 by 3.75 feet, egg-shaped, \$5.92; 2.75 by 4.125 feet, egg-shaped, \$7.42; 3 by 4.5 feet, egg-shaped, \$6.46; 3.25 by 4.875 feet, egg-shaped, \$6.81; 4-foot, circular, \$6.77.

Catch basins, including connections, by hired labor, averaged in cost \$53.83.

The sand used is of exceptional quality, being a nearly pure silica, of sharp, regular grain, obtained by dredging in the Potomac, and is delivered in a condition that would be termed "washed" in most localities; two sizes are used, the coarser for concrete and the finer for brickwork.

The gravel is used for concrete. Broken stone, at \$1.50 per cubic yard, was formerly used for this purpose, but the saving in purchase price by using gravel, as well as other advantages following its use, which are stated in describing the construction of sewers, have caused it to be employed exclusively in the department. All pipe larger than

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TILDEN FOUNDATIONS

is of the ring pattern, that is, without bell ends. It is found the bottom of the sewer, with this pipe, can be made much more and free from projections due to irregularities of circumference. Timber used for braces and shoring is Virginia pine, costing \$13.50 000 feet, and can be ordinarily used about eight or ten times.

Plans for sewers are prepared in the office of the superintendent of sewers. The sewers in the city being upon the combined system, the quantity of rain water which any one will have to carry controls its size and gradient, and to determine this quantity the empirical rule has been adopted, that one draining an area of 10 acres or less must be capable of carrying an amount equal to 3 inches per hour reaching the sewer. For areas of 60 acres or over the formula  $Q = 5.29375 A^{\frac{2}{3}}$  is used in which Q is the number of cubic feet per second to be carried by the sewer and A is the area in acres; this corresponds to an amount of 3 inches per hour reaching the sewer; for areas between 10 acres and 60 acres the quantity of discharge is assumed to vary proportionally to the square root of the area.

In determining the grade and size of sewer, the formula

$$V = \frac{(180.99 S^{\frac{3}{2}} + .002907 S^{\frac{5}{2}}) R}{.54158 S + .00003649 + S R^{\frac{2}{3}}}$$

is used, which is practically Kutter's formula with  $n = .013$ . A graph was prepared some years ago showing the relation between the size and size of sewer and velocity and quantity of flow and published in the annual report of 1890, and is again inserted. In this graph the abscissas vary according to the law of square roots, with the result that the line representing each size of pipe is a straight line, corresponding to a greater accuracy of position and intersection of lines than would be the case were the abscissas to vary according to the natural numbers and the size of pipe be represented by a line constructed by points. The table also shows the drainage area corresponding to the quantity of water carried by the sewer in units of 10,000 cubic feet.

The plan for the sewer, including such drawings as may be necessary to estimate of its cost, is then forwarded to the officer in charge for his approval, and is by him sent to the Engineer Commissioner of the District; if approved by him and ordered by the Board of Commissioners, the papers are returned through the same channel to the superintendent of sewers, who assigns the work to one of the assistant engineers, who locates the line upon the ground, giving stations every 100 feet, with the depth of excavation to the bottom of the interior of the sewer at each.

For pipe sewers a table giving the quantity of material per 100 feet of each size has been made, and is as follows:

*Materials required for concrete for laying 100 linear feet of pipe sewer.*

Proportions, 1: 2: 4.	24 inches dia.	21 inches dia.	18 inches dia.	15 inches dia.	12 inches dia.	10 inches dia.	8 inches dia.
1 unit = barrel .....	19.14	17.16	14.77	12.79	10.58	9.14	6.76
1 unit = cubic yard .....	5.85	5.25	4.52	3.92	3.23	2.79	2.07
1 unit = cubic yard ..	11.70	10.49	9.04	7.83	6.47	5.59	4.16

NOTE.—Pebbles and sand increased 10 per cent for waste.

For the requisition upon the superintendent of property for the estimated amount of material necessary for the sewer, naming the locality of the sewer and appropriation to which chargeable, is then made out by the



assistant engineer and after being approved by the superintendent of sewers is sent to the accounting clerk of the engineer department, who is entirely independent of the division of sewers and plumbing; this clerk verifies the fact of the work having been ordered by the Commissioners and enters the items with their money value upon his books and notes these facts upon the paper. It then goes to the officer in charge for his approval and after that to the superintendent of property. He enters the requisition upon his books and draws an order for the material upon the property yard which has the articles or that one which gives the shortest haul and gives the order to the foreman in charge of the work, who presents it at the yard upon which it is drawn. The hauling is done by the carts engaged upon each job and at such times as will be to the advantage of the work and not cause obstructions in the streets. The foreman gives the property-yard keeper a receipt ticket for each load hauled. The amounts hauled and destinations are reported to the superintendent of property at the end of each day and the receipted tickets inclosed. Upon issue of all the property or completion of the job the order is indorsed by the yard keeper and returned to the superintendent of property, who reports the amounts actually used to the accounting clerk and superintendent of sewers, to be charged into the cost of the work. In case material hauled for a work remains over it is carried by the foreman to the next locality, being credited to the first work and charged to the second as if it were an issue from the yard. If the material ordered proves insufficient a supplementary requisition for the necessary amount is made. No material whatever is allowed to leave the property yards without receipt.

The same method is followed in furnishing material to a contractor except that the contract specified value of such issued material, except pipe and manhole irons, is charged against him and deducted from payments made to him.

The trenches for pipe sewers are ordinarily from 2½ to 3 feet wide with headers of about 2 feet in width at intervals of about 10 to 16 feet, these headers being tunneled through 3 or 4 feet above the bottom. The stations given by the assistant engineer are always left in a header. The foreman erects a stout stake at each station and marks on it, at a convenient distance above the ground, an arbitrary number of feet above the bottom of the interior of the sewer, this number of feet being the same for all the stations; a cord is then stretched from stake to stake at the marked point, and is therefore parallel to the bottom of the sewer. Foremen are required to keep this cord stretched across four stations, or for a distance of 150 feet, thus giving an opportunity to detect any error. Measurements to the bottom of the trench are then easily made by means of a graduated pole or plumb-bob line. When the trench is to the required depth, 6 inches of concrete is spread over the bottom and well rammed with iron rammers of about 18 square inches striking surface, weighing 16 pounds, and wooden rammers of 1 foot square striking surface and 4 inches thick, with wooden handle. The concrete is made in batches of 1 barrel natural cement, 2 barrels sand, and 4 barrels gravel, and is mixed by a gang of eight men, as follows:

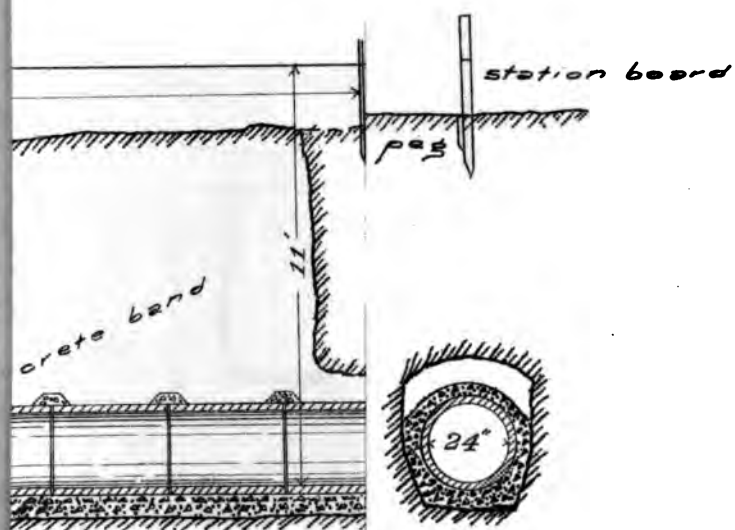
The cement is turned upon the mixing platform, which measures 12 feet by 16 feet, the sand is then added, and the men, working two on each side of the platform, turn the mass with shovels from the center into four piles at the corners, then back again to the center until it is of a uniform color; it is then spread out about 2 inches thick and the



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THOMAS J. PULLEN  
ASTORIA, OREGON  
TILDER 1910

gravel spread evenly over it; water is then added and the gravel and mortar thoroughly incorporated by turning from the center to the corners and back as before. Hoes are sometimes used in mixing, but for continuous work the men appear to prefer the shovels. Ordinarily the mixing gang helps place the concrete, the time of mixing and placing averaging thirty minutes per batch. If a gang mixes steadily it can make a batch every fifteen minutes. Gravel is found to be much better for sewer purposes than broken stone for several reasons: It mixes more readily, the average time for making a batch with stone being nineteen minutes; it can be rammed quickly and also much more compactly in the quantities used, thus giving a cheaper and better product. Better results are obtained by adding the water after the gravel is placed upon the mixed sand and cement than by adding the gravel to a mortar of the other materials. The preparation of the ingredients is done by the mixing gang.

After the concrete has been brought to the required depth, as determined by the rod and cord, the pipe is lowered and placed in position, each section being tested for grade by the rod, which has a projection of about an inch in length upon its lower end for this purpose, allowing it to enter the pipe and the measurement to thus be made from the bottom of the interior; to measure from the top of the pipe would not insure an even surface along the bottom. For alignment the pipe is tested by a plumb-bob whose string is held against the cord. The pipe being properly bedded, concrete is lowered in buckets, care being taken to empty the first three or four on the axis of the pipe, the concrete falling to the sides, it being found that if the bucketful is placed in at one side there is danger of displacing the pipe laterally. After 4 or 5 inches have been placed in this manner the concrete is worked against the pipe by a shovel or trowel, and when about 6 inches has been put in it is well rammed; after being brought up slightly above the horizontal diameter bands of concrete are placed over the joints as shown in the drawings; it being impossible to ram these bands without displacing them, they are compacted as much as possible with wooden paddles and heavy trowels made of five-sixteenths-inch iron. Where possible the concrete is allowed to remain twenty-four hours before any earth is filled back into the trench. The interior of the sewer is always examined to see that no mortar has been forced through the joints so as to form a projection or obstacle to the flow of water.

Contractors upon pipe sewers are required to follow the same methods, the inspector setting the cord.

This city has had great trouble with the pipe sewers laid about twenty years ago, and very many of them have to be replaced entirely, the expense of doing so without interrupting the flow of sewage making the replacing sewer cost more than one of the same size laid as a new one. The active cause of the failure of these sewers is root intrusion, but the primary causes are several, as stated by Mr. McComb in his report, one being lack of proper gradient of the bottom of the sewer trench, the grade having been tested at intervals of 100 feet and guessed at for the intervening interval, and if any obstacle, such as a boulder or stump, was encountered in the trench the sewer was simply laid around it or over it; another, as stated, was carelessness in jointing, the pipe having been simply laid in the bottom of the trench without any particular care to see that each section occupied its proper position. This defect has doubtless been increased by the action of the roots of trees entering the joints and forcing the pipes apart, but when a sewer on being uncovered resembles in lines a rail fence on undulating ground more



than any engineering structure the trees can not be held entirely responsible. The failure in strength of the pipe is also fully explained by Mr. McComb. This work was all done by contract, and as the District had but one inspector to each section of the city, who was supposed to look after all operations of building, street paving, sewers, etc., in that section, it is not surprising that contractors could do work pretty much as they pleased, and it may be a matter of congratulation that only one sewer, that on the east side of Twenty-first street NW., between N and O streets, was paid for and never found. Were it not on account of the stoppage of the sewers by tree roots many of those that now have to be replaced would continue tolerably serviceable for many years to come, but when a single root not as large as a lead pencil entering a joint can develop such a mass of rootlets as to completely choke a 10 inch pipe for a length of several feet, and entrances for the roots exist every few feet, the necessity for replacing many of these pipe sewers without delay is evident. The photograph accompanying this report shows a mass of roots similar to what is encountered in almost every sewer being replaced.

Washington streets, with their width, fine pavements, and magnificent lines of shade trees, are models for the world, but owing to the width and expensive pavements it has been necessary to place most of the pipe sewers in the sidewalks where they are most exposed to the action of the tree roots. This condition of affairs renders necessary in sewers now built a degree of protection for the joints that would be extravagance in most cities. In many cases where the roots have entered the sewers they are cut out, and the interior of the sewer freed in this manner. This method, however, can afford but temporary relief; and as the larger part of the old sewers are so crooked that nothing can be done beyond a few feet from the manhole, the only remedy is to rebuild them. The softer-wooded and most rapidly growing trees appear to cause the most trouble.

All large sewers for which contracts were let during the year are entirely of concrete, with the exception of the invert surface, which is of vitrified brick. Bids in each case were asked for brick and for concrete construction, and in each case the concrete was the lower. Upon the Rock Creek sewer the bids of the contractor to whom the work was awarded were, brick, \$64,964; concrete, \$55,910. Upon the sewer in Twelfth street SE. the bids were, brick, \$18,430; concrete, \$17,590. A photograph of this sewer when near completion accompanies the report, and also cross sections of the sewers wholly or partly constructed during the year.

The 24-inch sewer built of concrete cost more per foot than the same size sewer of pipe; but this was partly due to the exceptional depth at which it had to be laid. A careful comparison will be made this year between the smaller sewers of each material, and next year's report will be able to contain more definite information. One great difficulty in this city of building the smaller sizes of sewers in concrete is, that the sewer is almost invariably put into use within such a short time after construction that the concrete does not have opportunity to acquire its strength before it is subjected to abrading effects.

The number of new connections with brick sewers has during the year been restricted as much as possible, and in all cases where practicable connections with pipe sewers have been made instead. The reason for this is that a sewer of the combined system being necessarily much larger than required to carry merely the sewage or dry-weather flow, and the house lateral entering the sewer not lower than



SEWER IN TWELFTH STREET SE. BETWEEN N STREET AND THE RIVER.







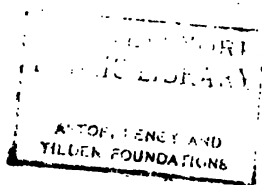
TREE ROOTS FROM SEWER PIPE.





TREE ROOTS FROM SEWER PIPE.









the springing line, it follows that, except during time of heavy rains, the sewage from the house trickles down the side of the sewer in a thin layer exposed to the air, thus being placed in a condition most favorable for putrefaction, with all the resulting discomfort of offensive odors and some of the dangers which the sewerage system was constructed to avoid.

It is to be recommended that hereafter all subdivisions of blocks or lots be submitted to the sewer department for examination before being approved and placed of record. These subdivisions are frequently made without any consideration concerning the laying of sewers, or under the impression that sewerage facilities exist, with the result that it afterwards becomes necessary for the District to build sometimes as much as 300 feet of sewer which would have been entirely unnecessary, and whose cost would have been saved had the property lines been slightly changed.

As soon as the system of street extension is approved and the grades of the streets decided upon, the plans and estimates for the trunk sewers to the outlying districts will be prepared, so that work thereon can be begun as soon as the appropriations at the disposal of the department permit.

The importance of carrying out the plans adopted by the Government for the system of sewage disposal has been reported before, and it is not necessary here to do more than invite attention to those reports, with the remark that time has emphasized all that was said in them.

In conclusion, I would state that the credit for the sewer system of the District of Columbia as described belongs to my predecessors in charge of this office, and to Mr. D. E. McComb, who has been superintendent of sewers for many years. Having been here but a few months, my share has necessarily been small.

#### PLUMBING OFFICE.

Mr. Ball, inspector of plumbing, in his report appended, describes the operations of this office for the past year. The value of plumbing inspection is becoming better known and appreciated by the citizens, and in many cases people now decline to rent a dwelling unless a certificate is furnished as to the safe condition of its plumbing. Were this stand assumed more generally, the people would be much better protected in the sanitary conditions of their homes and the reputable plumbers of the city greatly assisted in their effort to secure a proper and safe quality of work under all circumstances.

The amount of work devolved upon this office is such that it taxes the present force of inspector and five assistants to the utmost to make all the necessary examinations, and it is only with great exertion that they are able at times to avoid causing the plumbers to wait for inspection. Were the force increased by an additional assistant, the work of keeping the office records could be brought to date and kept in a more satisfactory manner than is possible now. With the increase of building in the outlying districts, the inspectors are able to make fewer inspections than was possible when work was confined to localities nearer the center of the city, and this condition of affairs is growing steadily more onerous to the office.

It is in many respects desirable to extend the province of the office to the inspection of gas fixtures in old houses, but until some increase of force is made it is impossible to properly take up this duty. The inspectors, in examining plumbing repairs, have occasionally notified



the occupants of the houses of the dangerous condition of the leaky fixtures or keys unprovided with stops.

#### PERMIT OFFICE.

The work done in this office during the past year is shown in the report of Mr. Woodward, permit clerk, which is appended hereto. In its new location it is hoped that the complaint and intelligence office and employment bureau features will render even more satisfactory service to the public than during the past.

The District courts have decided that the police department has no authority to prevent unauthorized persons digging up the city streets and sidewalks, and that no power is vested in the Commissioners to make or enforce regulations to protect the pavements. It is recommended that steps be taken to secure legislation necessary to give the Commissioners power of control in this respect.

#### PROPERTY OFFICE.

The appended report of Mr. Boiseau, superintendent of property, shows the work done by this office during the year in caring for District property to be used for engineering purposes.

The advisability of fencing in the property yards has been reported so many times without securing an appropriation for the purpose that it seems superfluous to renew it. Most of the material kept in the open yards is of such nature that it could not be used to advantage by private parties, and the greatest loss is in pipe broken by boys playing around the yard in the evening.

Very respectfully,

LANSING H. BEACH,  
*Captain of Engineers, U. S. A.*

Maj. CHAS. F. POWELL,  
*Corps of Engineers, U. S. A., Engineer Commissioner, D. C.*

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#### REPORT OF SUPERINTENDENT OF SEWERS.

WASHINGTON, D. C., July 25, 1895.

SIR: I have the honor to submit the following report of the operations of the sewer division for the fiscal year ending June 30, 1895.

Under the appropriation for cleaning and repairing sewers and basins, work was performed as follows: 110,472 linear feet of pipe sewers, 51,861 linear feet of brick sewers, 9,079 manholes and 74,007 receiving basins were cleaned, from which were removed 16,235 cubic yards (estimated) of sediment, consisting of street detritus and sludge; 1,637 linear feet of pipe sewers were taken up and relaid; 1,068 linear feet of brick sewers were repaired; 78 linear feet of 2.75 feet by 4.125 feet egg-shaped brick sewer was constructed; 633 minor repairs to sewers were made; 29 manholes were constructed, 350 were repaired, 6 were abandoned, 6 were reconstructed, and 69 had new covers placed on; 5 basins were constructed, 377 basins were repaired, 13 new tops and 36 new grates and frames were placed on basins, 10 basins were reconstructed, and 2 basins were abandoned.

Tiber and Missouri avenue sewers were cleaned during the year after each storm at a cost of \$1,451.46.

In order to properly drain square No. 379, it was found necessary to reconstruct 98 linear feet of sewer and one basin in alley opening upon D street.

Owing to change in surface grades in north half of square No. 510, it was necessary to reconstruct 204 linear feet of 8-inch and 10-inch pipe sewer and 2 manholes.

The brick sewer, which was constructed in 1875 along the north side of Q street NW., from New Hampshire avenue to Connecticut avenue, was in defective condition, the gradient being false in places, causing pools of sewage to exist at all times, and the arch was badly distorted and cracked in several places. As the sewer along



the south side was found to be of sufficient capacity to carry its drainage, the sewer on the north side was abandoned and the sewers discharging into it were connected with the sewer along the south side of the street. To do this there was constructed 78 linear feet of 2.75 by 4.125 feet egg-shaped brick sewer and 126 linear feet of pipe sewer, ranging from 10 inches to 24 inches in diameter.

The flushing gates at the facade of Tiber sewer have been operated during the year advantageously to the sewer and also to James Creek Canal.

Under the appropriation for relief sewers and replacing obstructed sewers there was constructed: Under contract, 9,761.25 linear feet of pipe sewers, varying from 12 to 24 inches in diameter, and by day labor 14,311.7 linear feet of pipe sewers, varying from 8 to 24 inches in diameter, 1,024 linear feet of 6-inch lateral connections, 83 manholes, and 2 basins.

The principal faults requiring the replacement of sewers laid under board of public works contracts are these.

1. Little attention was paid to securing good alignment, the trenches being excavated to the given grade at station points (usually 100 feet apart); the trenches between stations were graded by sighting along the trench, and if boulders or other obstacles were encountered the sewer was bent around either to one side of or over the obstacle.

2. The jointing is generally defective and tree roots intrude, which develop until the sewer becomes obstructed, the soft-wood trees, maples and poplars, causing the greatest amount of mischief.

3. Failure is also caused by an insufficient compacting of the earth filling along-side pipes, the effect being that the horizontal resultant of the arch stress is not sufficiently resisted; as a result the pipe spreads, the upper portion drops and cracks, and if the collapse is not sufficient to obstruct the sewer, that result will come later from root intrusion through the cracked pipe. This effect is noted generally in pipe sewers of 18 inches diameter and above, of earthenware and in all sizes of cement-pipe sewers. The 12-inch and 15-inch earthenware sewers seldom fail from this cause.

The work performed under the permit system included the construction of 7,925 linear feet of pipe sewers, varying from 8 inches to 21 inches in diameter; 52 manholes and 4 basins, divided among 57 jobs, averaging in cost per job \$214.66, in length of sewer per job 139 feet, and in cost per linear foot, \$1.543.

Under the assessment system there was constructed 26,103 linear feet of pipe sewers varying between 8 inches and 24 inches in diameter, 152 manholes, and 4 receiving basins, divided among 84 jobs, averaging in cost per job \$494.21, in length of sewer per job 310.75, and in cost per linear foot \$1.59.

Sewers were constructed at whole cost to applicants aggregating 1,186 linear feet, varying in sizes between 6 inches and 12 inches in diameter, 12 manholes, and 5 receiving basins, divided among 29 jobs, averaging in cost per job \$82.33.

Under the appropriation for main and pipe sewers, main sewers were constructed under contract as follows: L street NE., between North Capitol and First streets; Fourteenth street SE., between A and B streets; Fifteenth street NE., between Tennessee avenue and C street; B street SE., between Nineteenth street and Anacostia River; K street SE., between Thirteenth and Fourteenth streets; L street NE., between First street and Delaware avenue. Work was commenced on the extension to deep water of the sewers in Sixth and Twelfth streets SE. There was also constructed 1,418.6 linear feet of pipe sewers, varying in size from 15 inches to 24 inches in diameter. By day labor there was constructed 7,167 linear feet of pipe sewers, varying from 8 inches to 24 inches in diameter; 325 linear feet of 2 by 3 feet egg-shaped concrete sewer; 9.25 linear feet of 2.75 feet diameter circular brick sewer; 1,340.4 linear feet of 24 inches diameter concrete sewer; 53 manholes, and 50 receiving basins.

Under the appropriation for suburban sewers the following main sewers were constructed under contract: Thirteenth street NW., between Columbia and Kenyon streets; Sherman avenue NW., between Marshall and Farragut streets; Sherman avenue NW., between Farragut and Sheridan streets, and work was commenced on sewer in Linden street NW., between Wilson and Pomeroy streets. There was also constructed 1,979.9 linear feet of pipe sewers, varying from 18 inches to 24 inches in diameter. By day labor there was constructed 2,587 linear feet of pipe sewers, varying from 10 to 24 inches in diameter; 5 linear feet of 24 inches diameter concrete sewer, 15 manholes, and 23 basins.

Under the appropriation for automatic siphons 12 flushing basins were constructed by day labor.

The following work was performed for the surface division and charged to appropriation for improvements and repairs to streets: 793 linear feet of pipe sewer was constructed, varying from 8 inches to 18 inches in diameter; 15 receiving basins were constructed, 29 receiving basins and 4 manholes were reconstructed and adjusted to conform to new lines and grades of streets being improved.

Of the Easby's Point main intercepting sewer there has been constructed 740.4 linear feet of 11.25 feet diameter, 381 feet of 10.50 feet diameter, and 417 linear feet of 9.67 feet diameter circular brick sewer.

Under contract, work upon the Rock Creek intercepting sewer was begun in March of this year, and 2,564 linear feet of the sewer has been completed. This sewer is now complete between Q street and the Zoological Park.

Observations of rainfall and sewer discharge have been continued through the year, and the result will be compiled and tabulated when this may be done without interference with the regular work by the office force.

The reduced prices for materials which have prevailed during the year have caused a reduction in cost of work performed as compared with the previous year's work. The average cost of 8-inch sewers is larger than the average cost of 1894, but in that year the general average was reduced by the construction of a shallow sewer 1,871 feet long for the sewerage of the Girls' Reform School, which was built at a very low price, viz, 77.2 cents per linear foot. If that sewer be taken from the table of work performed in 1894, the cost of 8 inch sewer work for 1895 will fall below the cost of sewers of that size in 1894.

The cost of pipe sewer work performed by day labor compares well with that performed under contract. The average cost of 15-inch sewers by day labor was 12.4 cents per linear foot less than by contract. The average cost of 18-inch sewers by day labor was 10.5 cents per linear foot less than by contract; the average cost of 21-inch pipe sewers by day labor was 11.8 cents per linear foot less than by contract, while the average cost of 24-inch pipe sewers by day labor was 20.9 cents per linear foot greater than by contract. The four jobs containing 24-inch sewers constructed by day labor contained one job of more than usual difficulty, viz, the sewer in D street NW., between Twenty-sixth street and the Potomac River, where a large amount of rock excavation was necessary, which increased the cost much beyond the average. If this exceptionally difficult job be taken from the table, the cost of 24-inch pipe sewers constructed by day labor will be 16 cents per linear foot less than the average cost by contract.

Tables numbered from 1 to 12 are transmitted herewith.

Table 1 shows contract work under appropriation for relief sewers and replacing obstructed sewers.

Table 2 shows contract work under appropriation for main and pipe sewers and main intercepting sewer.

Table 3 shows contract work under appropriation for suburban sewers and Rock Creek intercepting sewer.

Table 4 shows work done under the voluntary permit system.

Table 5 shows work done under the assessment system.

Table 6 shows work performed at whole cost to applicant.

Table 7 shows work done by day labor under appropriation for relief sewers and replacing obstructed sewers.

Table 8 shows work done by day labor under appropriation for main and pipe sewers.

Table 9 shows work done by day labor under appropriation for suburban sewers.

Table 10 shows work performed by day labor under miscellaneous appropriations.

Table 11 shows comparative cost of sewers.

Table 12 shows number of inspectors, overseers and other employees of the sewer division or paid from sewer appropriations.

Very respectfully,

D. E. McCOMB,  
*Superintendent of Sewers.*

THE ENGINEER COMMISSIONER OF THE DISTRICT OF COLUMBIA.

*Sewers constructed under various contracts, fiscal year 1895.*

TABLE 1.—APPROPRIATION FOR RELIEF SEWERS AND REPLACING OBSTRUCTED SEWERS.

Num- ber of con- tract.	Contractor.	Location.	Size of sewer.	Length.	Contract price (per foot).	Amount of voucher, less materi- als charge- able to con- tractor.	Materials fur- nished.		Cost of in-spec- tion.	Total cost.
							Charge- able.	Not charge- able.		
1921	E. G. Gummel.....	G street, between Third and Four-and-a-half SW	24-inch pipe.....	<i>Feet.</i> 615.4	\$1.59	\$914.48	\$108.00	\$457.47	\$201.00	\$1,681.95
1923	Ralph Wormley.....	M street, between Eighth and Ninth SE.....	do.....	327.7	1.90	521.64	67.50	231.55	174.00	994.69
2008	E. G. Gummel.....	Sixth street, between R and S NW.....	do.....	561.2	1.87	1,061.59	110.00	291.15	258.00	1,720.74
2009	Cotton & Bolden.....	Third street, between A and C NE.....	21-inch pipe.....	1,004.7	1.61	1,603.91	191.35	444.30	368.40	2,697.96
			18-inch pipe.....	46.6	1.45					
2055	Thos. Buckley.....	Second street, between F street and Massachu- setts avenue NW.....	24-inch pipe.....	623.7	1.83	1,180.71	126.47	360.58	223.00	1,891.06
2056	John P. Larguey.....	Maryland avenue, between Third and Four- and-a-half streets SW.....	do.....	770.1	1.85	1,414.04	136.43	393.18	284.00	2,228.25
			do.....							
2058	Naylor & Brenizer.....	Massachusetts avenue, between Ninth and Eleventh streets NE.....	21-inch pipe.....	340.9	1.90	1,273.05	119.00	250.86	310.00	1,952.91
			18-inch pipe.....	299.9	1.60					
2060	Geo. S. Good & Co.....	Eleventh street, between New York avenue and M street NW.....	24-inch pipe.....	123.5	1.20					
			12-inch pipe.....	1,043.1	2.15					
2082	Thos. Buckley.....	M street, between Sixth and Water SW.....	21-inch pipe.....	127.9	1.85	3,141.00	360.00	754.40	646.00	4,901.49
			15-inch pipe.....	643.5	1.45					
2083	Naylor & Brenizer.....	Fourth street, between Florida avenue and Roanoke street NW.....	24-inch pipe.....	50.7	1.20					
			12-inch pipe.....	33	1.71	693.59	91.20	176.51	150.00	1,111.30
2085	Lyons Bros.....	Sixth street, between G and H SW.....	21-inch pipe.....	246.3	1.56					
			18-inch pipe.....	190.65	1.23	2,106.39	197.41	653.16	446.00	3,402.96
2086	Thos. Buckley.....	H street, between Four-and-a-half and Sixth SW	24-inch pipe.....	1,308.6	1.70					
			12-inch pipe.....	326.3	.95	334.32	27.20	43.82	69.25	474.59
2087	Lyons Bros.....	I street, between Third and Four-and-a-half SW	15-inch pipe.....	170.6	1.21					
			10-inch pipe.....	293.9	1.90	617.53	38.25	101.31	117.30	874.39
2088	Lyons Bros.....	Virginia avenue, between Twenty-first and Twenty-second streets NW.....	21-inch pipe.....	83	.85					
			18-inch pipe.....	310	1.93					
2089	Lyons Bros.....	Twenty-first and Twenty-second streets NW.....	21-inch pipe.....	85	1.80				18.00	(1)
			21-inch pipe.....	127	1.78				24.00	(1)

1 Work incomplete.

## Sewers constructed under various contracts, fiscal year 1895—Continued.

TABLE 2.—APPROPRIATION FOR MAIN AND PIPE SEWERS.

Num- ber of con- tract.	Contractor.	Location.	Size of sewer.	Length.  <i>Feet.</i>	Contract price (per foot).	Amount of voucher, less maten- als charge- able to con- tractor.	Materials fur- nished.		Cost of inspec- tion.	Total cost.
							Charge- able.	Not charge- able.		
1922	James McCandlish	L street NE., between North Capitol and First.	4 feet diameter.	272.1	\$5.55	\$1,205.59	\$326.56	\$6.14	\$305.00	\$1,843.29
1924	Robt. H. Lamb	Fourteenth street, between A and B SE.	2.75 by 4.125 feet.	399.6	5.50	1,630.09	1,620.00	12.26	376.20	2,638.55
2003	B. J. Coyle	Fifteenth street, between C street and Ten- nessee avenue NE.	3.25 by 4.875 feet.	1,088.7	5.70	6,349.49	2,458.46	41.24	1,407.00	10,256.19
2007	Buckley & Larguey	B street SE., between Nineteenth street and Anacostia River.	2.25 by 3.375 feet.	310.2	4.10	5,209.73	1,883.24	48.20	1,091.00	8,232.17
2008	E. G. Gummel	K street, between Thirteenth and Fourteenth SE.	2.50 by 3.75 feet.	586.6	4.10	2,619.68	1,016.54	13.99	528.00	4,178.21
		L street, between First street and Delaware avenue NE.	2.50 by 3.75 feet.	318.1	5.61	2,086.18	704.00	11.65	608.00	4,988.60
		Patterson street, between First and Second NE.	2 by 3 feet.	220.3	4.20	236.13	83.00	87.87		
		Alley, square 711.	24-inch pipe	167.4	1.81	506.13	100.00	255.64		
		M street, between First and Second NE.	21-inch pipe	597.7	1.43	786.08	87.00	139.47	149.49	1,156.04
2059	Jno. Jacoby	Twelfth street SE., between N street and Ana- costia River.	18-inch pipe	856.5	1.22	4,456.25			421.92	( <sup>1</sup> )
		Sixth street SE., between Georgia avenue and Anacostia River.	5.75 feet, diameter.	377					180.00	( <sup>1</sup> )
			6.25 feet, diameter.	312						

<sup>1</sup> Includes \$20 for inspection chargeable to contractor.<sup>2</sup> Work incomplete; payment made on account.<sup>3</sup> Linear feet piles.<sup>4</sup> Linear feet.<sup>5</sup> Linear feet connecting section.

## APPROPRIATION FOR MAIN INTERCEPTING SEWER.

1794	H. L. Cranford	Section No. 1.	11.25 feet, D-shape.			\$1,832.18				
		Section No. 2.	11.25 feet, diameter	740.4		48,333.31	\$12,801.50			( <sup>1</sup> )
		Section No. 3.	10.50 feet, diameter	381		7,775.46	1,510.00			
		Section No. 4.	9.67 feet, diameter.	417		9,033.07	3,075.60			

<sup>1</sup> Work incomplete. Payment made on account.



TABLE 3.—APPROPRIATION FOR SUBURBAN SEWERS.

1924	Robt. H. Lamb.....	Thirteenth street, between Columbia road and Kenyon street.	2.25 by 3.375 feet.....	382.3	\$5.15	\$2,650.48	\$318.91	\$12.02	\$297.00	\$3,878.41
		Sherman avenue, between Marshall and Farragut streets.	2 by 3 feet.....	370.6	4.18	1,235.33	469.00	8.46	175.00	1,887.79
		Sherman avenue, between Farragut and Sheridan streets.	2.5 by 3.75 feet.....	359.6	4.67	995.73	358.40	8.59	128.00	1,520.72
2008	E. G. Gummel.....	Sherman avenue, between Sheridan street and Whitney avenue.	2 by 3 feet.....	329.4	4.12	490.58	60.00	161.79	51.00	763.37
		Sheridan avenue, between Sherman and Brightwood.	21-inch pipe.....	361.6	1.50	1,417.12	160.05	466.04	134.08	2,177.89
		Whitney avenue, between Sherman and Brightwood.	24-inch pipe.....	822.1	1.81	1,122.68	111.00	237.93	93.00	1,564.61
2084	Bolden & Wormley...	Linden street, between Wilson and Pomeroy...	18-inch pipe.....	796.2	1.37	32	.....	.....	47.00	( <sup>1</sup> )
			2.25 by 3.375 feet...	32	3.95	.....	.....	.....	.....	.....

<sup>1</sup> Work incomplete.

APPROPRIATION FOR ROCK CREEK INTERCEPTING SEWER.

2050	Jas. McCandlish.....	Rock Creek Valley, between Woodley road and Piney Branch.	2.75 by 4.125 feet..	2,564	.....	\$12,140.33	\$3,416.00	.....	\$1,972.75	( <sup>1</sup> )
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<sup>1</sup> Work incomplete. Payment made on account.

*Statement of sewers laid under the appropriation for assessment and*

TABLE 4.—WORK DONE UNDER

No. of order.	Location.	Pipe sewers laid (length in feet).						Manholes built.	Basins built.	Branches used.
		8-inch.	10-inch.	12-inch.	15-inch.	18-inch.	21-inch.			
37	Brightwood avenue, between Sheridan and Farragut.	.....	.....	55	.....	.....	.....	.....	.....	2
14	Connecticut avenue, between Bancroft Place and Florida avenue.	.....	45	69	30	.....	3	2	.....	.....
17	Connecticut Avenue Heights subdivision.	.....	18	.....	.....	.....	.....	.....	3	.....
12	Bancroft Place, between Connecticut avenue and Phelps Place.	.....	.....	208	.....	198	.....	3	.....	.....
13	S street, between Florida avenue and Phelps Place.	.....	178	171	.....	.....	.....	2	.....	8
15	Block 3, Connecticut Avenue Heights subdivision.	.....	.....	135	.....	.....	.....	1	.....	.....
16	Block 2, Connecticut Avenue Heights subdivision.	.....	219	300	.....	.....	.....	3	.....	9
9	Florida avenue, between North Capitol and Q streets NW.	.....	44	30	.....	.....	.....	1	.....	1
20	Florida avenue, between North Capitol and Porter streets NE.	.....	.....	208	.....	9	.....	1	.....	11
27	Kenesaw avenue, between Thirteenth street and Sherman avenue.	.....	.....	173	.....	.....	.....	.....	.....	7
50	New Hampshire avenue, between Q street and Dupont Circle.	.....	.....	20	.....	.....	.....	.....	.....	1
8	Vermont avenue, between Q and R streets NW.	.....	.....	5	.....	.....	.....	.....	.....	1
28	Bennings road, between Fifteenth and Sixteenth streets NE.	.....	.....	.....	.....	427	.....	3	.....	5
21	Columbia road, between Fourteenth and Fifteenth streets NW.	.....	622	.....	.....	.....	.....	3	.....	29
3	East Capitol street, between Kentucky and Massachusetts avenues.	131	.....	.....	.....	.....	.....	3	.....	4
24	Hanover street, between North Capitol and First NW.	.....	.....	246	.....	.....	.....	1	.....	9
40	Jefferson street, between M and Water NW.	.....	40	.....	.....	.....	.....	.....	.....	2
2	Oak street, between Harewood and Le Droit avenues.	.....	101	.....	.....	.....	.....	1	.....	13
51	Prospect street, between Thirty-seventh and Thirty-eighth NW.	.....	.....	19	.....	.....	.....	.....	.....	2
56	Randolph street, between Third and Fourth NE.	.....	.....	175	.....	.....	.....	1	.....	2
49	Roanoke street, between Thirteenth and Fourteenth NW.	.....	11	.....	.....	.....	.....	.....	.....	1
5	D street, between Thirteenth and Fourteenth NE.	.....	.....	.....	.....	558	.....	2	.....	6
41	D street, between Ninth and Tenth and Tenth street crossing Pennsylvania avenue NW.	.....	.....	21	.....	462	.....	3	.....	9
45	D street, between Tenth and Eleventh SE.	.....	.....	31	.....	.....	.....	.....	.....	2
57	D street, between Eighth and Ninth SE	.....	72	.....	.....	.....	.....	.....	.....	3
1	E street, between Six-and-a-half and Seventh SW.	.....	209	.....	.....	.....	.....	.....	.....	7
10	E street, between Eighth and Ninth SW	.....	86	21	.....	.....	.....	1	.....	4
23	E street, between Third and Fourth NE	.....	.....	94	.....	.....	.....	1	.....	2
26	F street, between First and Second NE	11	.....	.....	.....	.....	.....	.....	.....	1
29	K street, between Fourth and Fifth NW	.....	.....	42	.....	.....	.....	1	.....	.....
58	K street, between Four-and-a-half and Sixth SW.	.....	.....	17	.....	.....	.....	.....	.....	1
39	K and Canal streets SW. (to serve NW. corner).	.....	.....	45	.....	.....	.....	1	.....	.....
42	L street, between Ninth and Florida avenue NE.	.....	.....	51	.....	.....	.....	1	.....	3
34	O street, between Thirty-third and Thirty-fourth NW.	.....	34	.....	.....	.....	.....	.....	.....	2
38	do.	.....	11	.....	.....	.....	.....	.....	.....	1
53	Q street, between Lincoln avenue and First street NE.	.....	.....	.....	133	.....	.....	.....	.....	5
47	S street, between Twentieth and Connecticut avenue NW.	77	.....	36	.....	.....	.....	2	.....	1
46	U street, between Fourteenth and Fifteenth NW.	.....	79	.....	.....	.....	.....	1	.....	5
6	Fifth street, between E and F NE	.....	.....	70	.....	.....	.....	1	.....	5
33	Twelfth street, between C and D SE	.....	.....	121	.....	.....	.....	.....	.....	2

<sup>1</sup> Deposit \$2,126; \$1,704 for permit work, \$472 for whole cost of work.<sup>2</sup> Deposit \$662; \$542 for permit work, \$120 for whole cost of work.

permit work, and the whole cost to applicant for fiscal year 1895.

## THE VOLUNTARY SYSTEM.

Amount of deposit.	Cost to District of Columbia.	Cost to property owner.	Total cost.	Amount returned.	For whom done.	Overseer.	Date of completion.
\$44.00	\$40.08	\$40.08	\$80.06	\$3.97	J. R. Quinter.....	Lanigan..	Mar. 21, 1895
	97.20	97.20	194.40			Prince....	Sept. 26, 1894
	90.82	90.81	181.63			Lyddane..	Nov. 19, 1894
	367.92	367.92	735.84			Prince....	Sept. 14, 1894
11,704.00	187.18	187.18	374.36	596.92	J. B. Wimer.....	.....do....	Oct. 6, 1894
	131.18	131.18	262.36			.....do....	Sept. 24, 1894
	232.78	232.79	465.57			.....do....	Sept. 29, 1894
77.87	64.48	64.48	128.96	13.39	K. Kiernitzki.....	Ward.....	Sept. 1, 1894
187.00	150.80	150.29	300.59	36.71	Davidson & Davidson..	.....do....	Sept. 28, 1894
130.00	104.55	104.54	209.09	25.46	C. B. Keferstein.....	Lanigan..	Nov. 17, 1894
18.00	13.20	13.20	26.40	4.80	Frederick B. Pyle.....	.....do....	Apr. 27, 1895
9.00	6.42	6.43	12.85	2.57	L. Stargardter.....	.....do....	Aug. 3, 1894
*542.00	401.74	401.75	803.49	140.25	The Columbia Ry. Co.	Prince....	Dec. 3, 1894
306.00	341.72	341.72	683.44	54.28	Theo. A. Harding.....	.....do....	Oct. 20, 1894
143.00	114.84	114.83	229.67	28.17	E. I. Nottingham.....	Loulan....	Aug. 29, 1894
215.00	142.07	142.06	284.13	72.94	W. A. Kimmel.....	Prince....	Oct. 29, 1894
35.00	34.32	34.31	68.63	.69	H. Sommers.....	Ward.....	Apr. 6, 1895
85.00	71.30	71.30	142.60	13.70	W. A. Kimmel.....	Lanigan..	July 15, 1894
16.00	10.03	10.03	20.06	5.97	Geo. W. King.....	Prince....	May 7, 1895
233.50	90.47	90.48	180.95		Col. Geo. Truesdell <sup>3</sup> ..	.....do....	.....
7.50	6.75	6.76	13.51	.74	Swormstedt & Bradley.	.....do....	May 3, 1895
670.00	456.69	456.69	913.38		E. & S. H. R. R. Co <sup>4</sup> ..	Ward.....	July 28, 1894
828.00	786.10	786.10	1,572.20	41.90	Mrs. Jane C. Hitz.....	Lanigan..	July 3, 1895
22.50	19.23	19.23	38.46	3.27	George A. Green.....	Ward.....	Apr. 11, 1895
63.00	37.46	37.45	74.91		W. E. Wright <sup>3</sup> .....	Lanigan..	
142.00	133.46	133.45	266.91	8.55	Thomas Banks.....	Thomas....	July 24, 1894
108.00	78.15	78.14	156.29	29.86	F. S. Carmody.....	Lanigan..	Aug. 21, 1894
92.50	77.21	77.71	155.42	14.79	D. B. Groff.....	Ward.....	Dec. 10, 1894
15.00	7.47	7.48	14.95	7.52	D. B. Blaine.....	Prince....	Nov. 10, 1894
50.00	40.15	40.16	80.31	9.84	C. W. Somerville.....	Ward.....	Dec. 24, 1894
12.00	8.58	8.59	17.17		Mrs. B. Shieffer <sup>2</sup> .....	.....do....	
55.00	55.00	55.00	110.00		Nicolai Bros.....	Prince....	Mar. 8, 1895
60.00	53.85	53.84	107.69	6.16	John Mangam.....	.....do....	Jan. 25, 1895
29.00	25.85	25.85	51.70	3.15	John T. West.....	Ward.....	Jan. 28, 1895
17.00	16.46	16.47	32.93	.53	H. B. Burch.....	.....do....	Do.
110.00	89.16	89.15	178.31	20.85	T. D. Foster.....	.....do....	May 30, 1895
115.00	85.85	85.85	171.70	29.15	Boyd Smith.....	Prince....	June 4, 1895
64.00	63.28	63.28	126.56	.72	Patrick Shugrue.....	.....do....	May 22, 1895
70.00	60.15	60.14	120.29	9.86	George A. Green.....	Lanigan..	July 27, 1894
93.00	54.31	54.30	108.61	38.70	Richard Rothwell.....	Prince....	Dec. 7, 1894

<sup>3</sup> Balance carried to fiscal year 1896 for repairs to pavements.

<sup>4</sup> Balance, \$213.31, carried to job No. 10, whole cost.

*Statement of sewers laid under the appropriation for assessment and*

TABLE 4.—WORK DONE UNDER

No. of order.	Location.	Pipe sewers laid (length in feet).						Manholes built.	Basins built.	Branches used.
		8-inch.	10-inch.	12-inch.	15-inch.	18-inch.	21-inch.			
18	Thirteenth and D streets NE. (SW. corner).	.....	24	.....	.....	111	.....	2	1	.....
52	Fourteenth street, between C and South Carolina avenue SE.	.....	.....	105	.....	.....	.....	.....	.....	3
54	Fourteenth street, between Princeton and Harvard NW.	.....	.....	.....	108	.....	.....	.....	.....	6
7	Fifteenth street, from Kenesaw avenue northward.	.....	.....	86	.....	.....	.....	.....	.....	1
19	Fifteenth street, between Kenesaw and Grant avenues.	.....	.....	26	.....	.....	.....	.....	.....	1
48	Twenty-second street, between M and N NW.	.....	.....	14	.....	.....	.....	.....	.....	1
36	Twenty-third street, between M and N NW.	.....	.....	85	.....	.....	.....	.....	.....	2
31	Thirty-fourth street, between R and S NW.	.....	.....	125	.....	.....	.....	1	.....	4
30	Alley, square 50	.....	32	.....	.....	.....	.....	.....	.....	4
55	Alley, square 153	.....	254	.....	.....	.....	.....	2	.....	13
4	Alley, square 199	.....	58	.....	.....	.....	.....	.....	.....	5
44	Alley, square 520	.....	.....	51	.....	.....	.....	1	.....	3
35	Alley, square 575	.....	36	.....	.....	.....	.....	.....	.....	3
11	Alley, square 620	128	185	.....	.....	.....	.....	4	.....	23
25	Alley, square 774	38	.....	.....	.....	.....	.....	.....	.....	4
22	Alley, square 1052	.....	97	.....	.....	.....	.....	1	.....	8
32	Alley, square 1208 (old Georgetown No. 38).	191	.....	.....	.....	.....	.....	2	.....	7
Total		576	2,455	2,855	271	1,765	3	52	4	254

*permit work, and the whole cost to applicant for fiscal year 1895—Continued.*

THE VOLUNTARY SYSTEM—Continued.

Amount of deposit.	Cost to District of Columbia.	Cost to property owner.	Total cost.	Amount returned.	For whom done.	Overseer.	Date of completion.
( <sup>1</sup> )	\$162.38	\$162.38	\$324.76	.....	Eckington and Soldiers' Home R.R. Co.	Ward and Lyddane	Oct. 16, 1894
82.50	78.80	78.79	157.59	\$3.71	Weller & Repetti .....	Ward .....	May 18, 1895
161.50	76.97	76.98	158.95	84.52	Barr & Sanner .....	Prince .....	June 29, 1895
65.00	60.31	60.31	120.62	4.69	C. B. Tanner and F. B. Pyle.	Ward .....	July 31, 1894
20.00	15.00	15.01	30.01	4.99	F. B. Pyle .....	Lanigan ..	Sept. 22, 1894
25.00	19.63	19.64	39.27	5.36	E. L. McClelland .....	Prince .....	June 10, 1895
70.00	60.49	60.49	120.98	9.51	D. H. Kent .....	Ward .....	Jan. 4, 1895
114.00	102.75	102.75	205.50	11.25	Thos. E. Waggaman ..	do .....	Apr. 16, 1895
25.00	16.28	16.26	32.52	8.74	E. L. McClelland .....	do .....	Nov. 27, 1894
237.00	190.80	190.80	381.60	46.20	Geo. Watts .....	Lanigan ..	July 3, 1895
42.00	35.25	35.26	70.51	6.74	J. H. Merriwether .....	do .....	July 30, 1894
60.00	42.45	42.45	84.90	17.55	Henry Schneider .....	do .....	Mar. 21, 1895
56.00	29.93	29.94	59.87	26.06	Mrs. E. R. Wallace .....	Prince .....	Mar. 22, 1895
278.00	187.66	187.66	375.32	90.34	Jno. Miller .....	Ward .....	Nov. 30, 1894
40.00	17.95	17.96	35.91	22.04	Deeble, Davis & Co. ....	Prince .....	Dec. 24, 1894
85.00	68.47	68.48	136.95	16.52	P. Fersinger .....	Ward .....	Oct. 18, 1894
152.00	104.43	104.44	208.87	47.56	Thos. Hyde .....	do .....	Apr. 4, 1895
7,971.87	6,117.74	6,117.77	12,235.51	1,631.19			

<sup>1</sup> Paid out of general deposit of E. & S. H. R. R. Co.



*Statement of sewers laid under the appropriation for assessment and*

TABLE 5.—WORK DONE UNDER

No. of order.	Location.	Pipe sewers laid (length in feet).						
		8-inch.	10-inch.	12-inch.	15-inch.	18-inch.	21-inch.	24-inch.
55	Brightwood avenue, between Florida and Grant			356				
56	Brightwood avenue, between Grant and Howard avenues.					478		
57	Brightwood avenue, between Howard avenue and Irving streets.			502				
58	Brightwood avenue, between Trumbull and Howard avenues.			114				
73	Brightwood avenue, between Howard avenue and Irving street.			124				
84	Delaware avenue, between L and M streets SW.			335				
52	Eslin avenue, between Spring road and Lydecker avenue.				270	361	237	
61	Holmead avenue, between Spring road and Whitney avenue.			353		192	943	498
87	Kalorama avenue, between Columbia road and Eighteenth street.			272				
44	Kenesaw avenue, between Thirteenth and Fourteenth streets.			250	180	342		
17	North Carolina avenue, between First and Second streets SE.		121	201				
10	New Hampshire avenue, between H and I streets NW.		117					
8	New Jersey avenue, between E and F streets NW.		120					
5	Oregon avenue, between New Hampshire avenue and Eighteenth street NW.		137					
70	Pennsylvania avenue, between Sixth and Seventh streets NW.				404			
47	Pennsylvania avenue, between Ninth and Tenth streets NW.			210				
6	Vermont avenue, between Q and R streets NW.	26						
43	Vermont avenue, between Q and R streets NW.			91				
21	Whitney avenue, from Brightwood avenue eastward.			382				
13	Canal street, between M and N SE.	3	282	306				
9	Mill street, between P and Q NW.			264				
32	Moore's Lane, between Elm and Wilson streets NW.			286				
27	Pierce street, between Washington and Jackson, Anacostia.					273		
28	Prospect street, between Thirty-seventh and Thirty-eighth NW.			246				
2	South Capitol street, between C and D.			278				
86	Yale street, between Thirteenth and Fourteenth NW.			294	327			
1	Valley street, between P and U NW							
8	C street, between Fourteenth and Fifteenth NW.		199	231				
48	C street, between Ninth and Tenth SE.			34				
49	C street, between South Capitol and New Jersey avenue SE			256				
74	C street, between Fourteenth and Fifteenth SE.				474			
88	C street, between Tenth and Eleventh NE.		229					
45	D street, between Twenty-first and Twenty-second NW.		243	248				
53	D street, between Second and Third NW.			304				
64	D street, between Twelfth and Thirteenth NE.				252	240		
16	F street, between Second and Third NE.		156	168				
36	G street, between Ninth and Tenth SE.		246					
37	G street, between Tenth and Eleventh SE.		201	42				
4	K street, between Seventh and Eighth and square 887.		175	333				

\* Awaiting repairs to pavements.

\* Constructed under contract, No. 2057, by Bolden &amp; Wormley.

permit work, and the whole cost to applicant for fiscal year 1895—Continued.

## THE ASSESSMENT SYSTEM.

Manholes built.	Basins built.	Branches used.	Cost to District of Columbia.	Cost to property owner.	Total cost.	Overseer.	Date of completion.
2	.....	10	\$265.68	\$265.68	\$531.36	Prince .....	June 24, 1895
2	.....	20	671.03	671.04	1,342.07	....do .....	June 22, 1895
2	.....	20	464.30	464.30	928.60	....do .....	June 19, 1895
1	.....	.....	89.37	89.37	178.74	....do .....	( <sup>1</sup> )
1	.....	2	140.33	140.33	280.66	....do .....	June 18, 1895
2	.....	10	160.69	160.69	321.38	....do .....	June 25, 1895
2	.....	5	735.65	735.65	1,471.30	Lanigan .....	Apr. 22, 1895
7	.....	6	2,365.73	2,365.73	4,731.46	Shomo .....	* June 22, 1895
1	.....	1	170.46	170.45	340.91	Lanigan .....	( <sup>1</sup> )
4	.....	5	609.65	609.64	1,219.29	....do .....	Jan. 2, 1895
2	.....	14	254.81	254.81	509.62	Ward .....	Dec. 15, 1894
1	.....	3	91.36	91.36	182.72	Lanigan .....	Nov. 30, 1894
1	.....	3	97.09	97.08	194.17	Ward .....	Oct. 16, 1894
.....	.....	13	73.50	73.49	146.99	Prince .....	Oct. 6, 1894
2	.....	16	546.25	546.25	1,092.50	Ward .....	June 28, 1895
2	.....	9	239.16	239.16	478.32	Lanigan .....	Apr. 2, 1895
1	.....	1	23.77	23.77	47.54	Prince .....	Oct. 10, 1894
1	.....	5	79.05	79.06	158.11	Lanigan .....	Mar. 9, 1895
2	.....	14	225.14	225.14	450.28	....do .....	Dec. 8, 1894
2	.....	36	286.14	286.14	572.28	Ward .....	Nov. 2, 1894
2	.....	9	198.47	198.48	396.95	Lanigan .....	Nov. 13, 1894
1	.....	11	197.94	197.94	395.88	....do .....	Nov. 15, 1894
.....	.....	.....	226.19	226.19	452.38	Ward .....	Nov. 26, 1894
2	.....	9	183.85	183.84	367.69	....do .....	Dec. 5, 1894
1	.....	4	208.94	208.94	417.88	....do .....	Oct. 16, 1894
3	.....	12	409.37	409.37	818.74	Prince .....	Jan. 22, 1895
2	.....	26	159.52	159.52	319.04	Lanigan .....	* Oct. 27, 1894
.....	.....	.....	267.10	267.10	534.20	Ward .....	Oct. 25, 1894
.....	.....	2	29.39	29.39	58.78	....do .....	Apr. 22, 1895
2	.....	5	246.43	246.43	492.86	Prince .....	May 11, 1895
3	.....	15	529.40	529.40	1,058.80	Ward .....	May 8, 1895
2	.....	11	168.75	168.76	337.51	Lanigan .....	( <sup>1</sup> )
2	.....	22	354.47	354.47	708.94	Ward .....	Dec. 15, 1894
2	.....	17	253.94	253.98	507.87	Lanigan .....	May 17, 1895
2	.....	.....	395.11	395.11	790.22	Ward .....	Mar. 30, 1895
3	.....	9	206.85	206.86	413.71	....do .....	Dec. 10, 1894
1	.....	12	144.86	144.87	289.73	Prince .....	Jan. 13, 1895
2	.....	9	162.54	162.54	325.08	....do .....	Jan. 9, 1895
2	.....	20	364.50	364.60	729.19	Ward .....	Oct. 15, 1894

\*537 linear feet 5-inch connection laid.

*Statement of sewers laid under the appropriation for assessment and permit*

TABLE 5.—WORK DONE UNDER THE

No. of order.	Location.	Pipe sewers laid (length in feet).						
		8-inch.	10-inch.	12-inch.	15-inch.	18-inch.	21-inch.	24-inch.
29	K street, between Sixth and Seventh and square west of square 881.		199	246				
80	K street, between Four-and-a-half and Sixth SW.			196	321			
14	L street, between Fifth and Sixth SE.		141					
34	L street, between Third and Fourth NE.	41						
38	L street, between Seventh and Eighth NE.	117	24					
83	L street, between Third and Delaware avenue SW.		326					
11	M street, between New Jersey avenue and First street SE.			388				
71	N street, between Twenty-fourth and Twenty-fifth NW.			474				
35	O street, between Thirty-sixth and Thirty-seventh NW.			290				
41	Half street, between M and N SW.			559				
19	First street, between N and O SW.			247				
12	Third street, between M and N SE.		260	305				
30	Sixth street, between D and E NE.			235				
20	Seventh street, between Virginia avenue and I street, and Virginia avenue between Seventh and Eighth streets.			175				
31	Seventh street, between N and O NW.			36				
69	Seventh street, between H and I NE.		51					
7	Tenth street, between V and W NW.	81						
77	Tenth street, between C and D NE.			387				
23	Eleventh street, between I and K SE.			229				
60	Eleventh street, between I and Florida avenue NE.		352					
62	Eleventh street, between H and K NE.		315	60	30			
63	Eleventh street, between G and H NE.			380				
81	Eleventh street, between D and E NE.			188	243			
65	Twelfth street, between C and D (E. side) NE.			357				
66	Twelfth street, between C and D (W. side) NE.			351				
67	Twelfth street, between B and C NE.			363				
79	Fifteenth street, between A and B SE.			323				
46	Twenty-second street, between New York avenue and D street NW.		189	194				
78	Alley, square 151			282				
75	Alley, square 152		353					
51	Alley, square 214		151	129				
42	Alley, square 218		173					
39	Alley, square 231			101				
59	Alley, square 271		3					
15	Alley, square 515		132					
33	Alley, square 518							
40	Alley, square 650	193						
54	Alley, square 719	8	320	198				
25	Alley, square 721		203					
22	Alley, square 748		166					
18	Alley, square 749			252				
24	Alley, square 774	110	81					
50	Alley, square 886			210				
26	Alley, square 912	152						
68	Alley, square 1282 (old Georgetown No. 112).		3					
Total .....		726	5,668	13,644	2,501	1,886	1,180	496

<sup>1</sup> Awaiting repairs to pavements.

work, and the whole cost to applicant for fiscal year 1895—Continued.

## ASSESSMENT SYSTEM—Continued.

Manholes built.	Basins built.	Branches used.	Cost to District of Columbia.	Cost to property owner.	Total cost.	Overseer.	Date of completion.
2	.....	14	\$400.15	\$400.16	\$800.31	Prince.....	May 4, 1895
3	.....	20	398.59	398.59	797.18	Ward.....	( <sup>1</sup> )
1	.....	6	113.07	113.07	226.14	.....do.....	Apr. 25, 1895
2	.....	1	45.61	45.61	91.22	Prince.....	Nov. 19, 1894
2	.....	6	102.17	102.18	204.35	Lanigan.....	Nov. 15, 1894
2	.....	19	126.44	126.45	252.89	Prince.....	( <sup>1</sup> )
2	.....	14	257.12	257.11	514.23	Ward.....	Nov. 17, 1894
4	.....	9	343.09	343.09	686.18	Prince.....	June 25, 1895
2	.....	13	307.96	307.97	615.93	Ward.....	Jan. 26, 1895
4	.....	26	406.84	406.84	813.68	Prince.....	Feb. 27, 1895
2	.....	20	148.38	148.38	296.76	Ward.....	Nov. 17, 1894
2	.....	26	361.79	361.79	723.58	.....do.....	Nov. 15, 1894
2	.....	5	164.11	164.11	328.22	Prince.....	Dec. 14, 1894
2	.....	5	139.63	139.63	279.26	Ward.....	Mar. 20, 1895
.....	.....	3	29.47	29.48	58.95	Lanigan.....	Dec. 3, 1894
1	.....	3	41.74	41.74	83.48	Ward.....	May 27, 1895
1	.....	6	57.39	57.38	114.77	Prince.....	Oct. 22, 1894
2	.....	6	266.05	266.04	532.09	Ward.....	( <sup>1</sup> )
2	.....	8	174.59	174.59	349.18	Prince.....	Jan. 8, 1895
2	.....	11	213.15	213.15	426.30	.....do.....	Mar. 23, 1895
3	.....	18	250.78	250.78	501.56	.....do.....	Mar. 30, 1895
2	.....	10	223.32	223.33	446.65	.....do.....	Apr. 5, 1895
2	.....	1	276.13	276.13	552.26	Ward.....	( <sup>1</sup> )
2	.....	.....	233.05	235.05	470.10	.....do.....	Apr. 5, 1895
2	.....	3	271.36	271.36	542.72	.....do.....	Apr. 17, 1895
2	.....	.....	207.65	207.65	415.30	.....do.....	Apr. 22, 1895
2	.....	1	327.01	327.00	654.01	.....do.....	May 28, 1895
2	.....	13	282.91	282.92	565.83	.....do.....	Jan. 22, 1895
1	.....	6	170.76	170.76	341.52	Prince.....	June 5, 1895
2	2	1	221.72	221.72	443.44	King.....	May 13, 1895
2	.....	20	228.37	228.37	456.74	Lanigan.....	June 15, 1895
2	.....	7	116.37	116.36	232.73	Ward.....	Dec. 20, 1894
1	.....	7	83.00	83.00	166.00	Lanigan.....	May 18, 1895
.....	1	.....	20.01	20.01	40.02	Lyddane.....	Mar. 23, 1895
1	.....	12	88.75	88.76	177.51	Prince.....	Nov. 13, 1894
2	.....	20	122.36	122.35	244.71	.....do.....	Nov. 7, 1894
3	.....	46	313.67	313.67	627.34	.....do.....	Mar. 8, 1895
2	.....	13	180.56	180.56	361.12	.....do.....	July 3, 1895
1	.....	20	88.33	88.33	176.66	Ward.....	Dec. 1, 1894
1	.....	9	152.30	152.30	304.60	Prince.....	Nov. 15, 1894
2	.....	13	89.15	89.15	178.30	.....do.....	Nov. 21, 1894
.....	.....	9	50.72	50.72	101.44	.....do.....	Nov. 19, 1894
2	.....	12	169.30	169.30	338.60	.....do.....	Mar. 13, 1895
2	.....	10	161.65	161.64	323.29	Ward.....	Apr. 19, 1895
1	1	.....	31.32	31.32	62.64	Lyddane.....	Apr. 16, 1895
152	4	858	20,756.76	20,756.78	41,513.54		

*Statement of sewers laid under the appropriation for assessment and permit*

TABLE 6.—WORK PERFORMED AT

No. of order.	Location.	Pipe sewers laid (length in feet).							
		6-inch.	8-inch.	10-inch.	12-inch.	15-inch.	18-inch.	21-inch.	24-inch.
14	Connecticut avenue, between Florida avenue and Le Roy place.	.....	.....	.....	.....	.....	.....	.....	.....
3	Howard avenue (No. 1425) .....	.....	.....	.....	.....	.....	.....	.....	.....
4	Kentucky avenue, between East Capitol and B streets SE.	.....	63	.....	.....	.....	.....	.....	.....
25	Missouri avenue, between Four-and-a-half and Sixth, and Ninth street along Metropolitan R. R.	.....	.....	.....	.....	.....	.....	.....	.....
21	New York avenue, between Tenth and Eleventh streets NW.	.....	.....	.....	.....	.....	.....	.....	.....
23	New York avenue, between Tenth and Fourteenth streets NW.	.....	.....	75	.....	.....	.....	.....	.....
22	Bennings road, between Fifteenth and Sixteenth streets NE.	.....	.....	.....	.....	.....	.....	.....	.....
28	.....do .....	.....	30	.....	.....	.....	.....	.....	.....
15	Binney street, between Fourteenth and alley west of Fourteenth.	.....	.....	40	.....	.....	.....	.....	.....
29	Binney street, between Fourteenth and Fifteenth NW.	.....	.....	29	.....	.....	.....	.....	.....
6	D and First streets NW. (NE. corner)....	.....	.....	27	.....	.....	.....	.....	.....
7	D street, between Seventh and Eighth NW.	.....	.....	.....	.....	.....	.....	.....	.....
10	D street, between Thirteenth and Fourteenth NE.	.....	.....	.....	.....	.....	.....	.....	.....
11	D street, corner of Thirteenth NE.	.....	12	.....	.....	.....	.....	.....	.....
17	K street, between Third and Fourth SE.	.....	.....	.....	.....	.....	.....	.....	.....
27	K street, No. 1747, NW.	.....	.....	.....	.....	.....	.....	.....	.....
13	Q street, between Thirtieth and Thirty-first NW.	.....	.....	.....	19	.....	.....	.....	.....
26	U street, between Fourteenth and Fifteenth NW.	.....	51	.....	.....	.....	.....	.....	.....
12	V street, No. 1332, NW.	.....	.....	.....	.....	.....	.....	.....	.....
24	Second street, between Parker and K NE.	3	51	21	.....	.....	.....	.....	.....
20	Seventh street and Mount Vernon place NW.	.....	.....	.....	.....	.....	.....	.....	.....
1	Fourteenth street, between Bacon and Columbia road.	.....	.....	125	.....	.....	.....	.....	.....
2	Fourteenth street, between Bacon and Binney, and Bacon, between Fourteenth and Fifteenth.	.....	.....	236	.....	.....	.....	.....	.....
18	Alley, square 247.	30	.....	.....	.....	.....	.....	.....	.....
8	Alley, block 3 Connecticut avenue Heights S D.	.....	.....	193	87	.....	.....	.....	.....
9	L. B. Brown's subdivision, block 4 lot 1.	.....	.....	.....	.....	.....	.....	.....	.....
5	Howard avenue, No. 1439.	.....	.....	.....	.....	.....	.....	.....	.....
19	Bennings road, between Fifteenth and Sixteenth streets NE.	.....	30	.....	.....	.....	.....	.....	.....
16	Morgan street, between Second and Kirby NW.	.....	64	.....	.....	.....	.....	.....	.....
	Total .....	33	301	746	106	.....	.....	.....	.....

<sup>1</sup> 135 linear feet cast iron connection laid.

<sup>2</sup> House connection deposit made for inspection.

<sup>3</sup> Repairing manholes, etc., paid out of general deposit of Metropolitan Railroad Company.

<sup>4</sup> Lowered manhole paid out of general deposit of The Columbia Railway Company.

<sup>5</sup> Reconnecting basins paid out of general deposit of The Columbia Railway Company.

<sup>6</sup> Inspecting lateral paid out of general deposit of The Columbia Railway Company.

<sup>7</sup> Also reconstructed two basins, paid out of general deposit of The Columbia Railway Company.



work, and the whole cost to applicant for fiscal year 1895—Continued.

WHOLE COST TO APPLICANT.

Manholes built.	Basins built.	Branches used.	Amount of deposit.	Cost to property owner.	Amount returned.	For whom done.	Overseer.	Date of completion.
			\$200.00	\$86.66	\$113.34	J. B. Wimer.....	Prince .....	<sup>1</sup> Oct. 5, 1894
			8.00	3.00	5.00	E. H. Spang.....	Barton .....	<sup>2</sup> July 10, 1894
			75.00	43.92	31.08	E. I. Nottingham.....	Loulan .....	July 14, 1894
				256.36		Metropolitan R. R. Co	Neville & Lanigan.	<sup>3</sup> June 15, 1895
				7.11		The Columbia Rwy. Co	Bolden .....	<sup>4</sup> Nov. 24, 1894
				73.29		do .....	Prince .....	<sup>5</sup> Jan. 18, 1895
				44.00		do .....	Bright .....	<sup>6</sup> Feb. 28, 1895
	1			86.56		do .....	King .....	<sup>7</sup> May 17, 1895
		2	50.00	39.64	10.36	E. D. Farnham.....	Prince .....	Oct. 13, 1894
1		1	98.00	54.01	43.99	Thomas A. Harding..	do .....	June 14, 1895
	1			97.80		E. & S. H. Rwy. Co...	Lanigan .....	<sup>8</sup> Oct. 5, 1894
			12.00	8.00	4.00	Sam'l M. Bryan, pres..	Neville, J. A.	<sup>9</sup> Sept. 4, 1894
1			213.31	13.07	200.24	E. & S. H. Rwy. Co...	Shomo .....	<sup>10</sup> Nov. 12, 1894
		1		40.25		do .....	Lyddane .....	<sup>8</sup> Sept. 14, 1894
			4.00	4.00		F. J. Horan.....	Neville, Andrew.	<sup>9</sup> Nov. 3, 1894
			4.00	3.00	1.00	Mrs. J. K. Warren ..	Bolden .....	<sup>11</sup> Apr. 26, 1895
1		5	350.00	185.22	164.78	Davidson & Davidson.	Lanigan .....	<sup>12</sup> Nov. 7, 1894
			69.67	69.67		Patrick Shugrue.....	Prince .....	May 13, 1895
			16.00	16.00		A. D. Johnston.....	Bright .....	<sup>9</sup> Oct. 8, 1894
2		3	147.00	140.29	6.71	C. B. Keferstein.....	Prince .....	<sup>9</sup> Apr. 17, 1895
1			40.00	30.68	9.32	The Columbia Rwy. Co	do .....	Jan. 25, 1895
		4	273.00	165.95	107.05	L. S. Fristoe.....	Lanigan.....	Oct. 16, 1894
2		7	387.00	305.75	81.25	do .....	do .....	Do.
			45.00	20.45	24.55	Thomas Francis, jr...	do .....	Nov. 10, 1894
2		8	472.00	426.14	45.86	J. B. Wimer.....	Prince .....	<sup>13</sup> Oct. 4, 1894
			20.00	20.00		A. B. Jameson .....	Bright .....	<sup>9</sup> Sept. 12, 1894
			8.00	2.50	5.50	N. Pruitt .....	Donovan .....	<sup>2</sup> July 18, 1894
	2		120.00	82.13	37.87	The Columbia Rwy. Co	Prince .....	<sup>14</sup> Dec. 4, 1894
1		2	136.00	83.30	52.70	Peter Fersinger.....	do .....	Dec. 24, 1894
12	5	32	2,747.98	2,408.75	944.60			

<sup>8</sup> Paid out of general deposit of Eckington and Soldiers' Home Railway Company.

<sup>9</sup> Deposit made for inspection.

<sup>10</sup> \$213.31 balance of deposit brought from permit job No. 5.

<sup>11</sup> Lowered manhole.

<sup>12</sup> 124.2 linear feet of sewer constructed.

<sup>13</sup> Deposit, \$2,126; for permit work, \$1,704; for whole cost of work, \$472.

<sup>14</sup> Deposit, \$602; for permit work, \$542; for whole of cost, \$120.

*Work done by day labor under various*

TABLE 7.—APPROPRIATION FOR RELIEF SEWERS

No. of order.	Location.	Pipe sewers laid (length in feet).				
		6-inch.	8-inch.	10-inch.	12-inch.	15-inch.
39	Connecticut avenue, between N street and Dupont Circle.	3	.....	.....	148	.....
22	New York avenue, between Ninth and Tenth streets NW.	40	.....	12	227	.....
20	Rhode Island avenue, between Fourteenth street and Iowa Circle.	6	.....	.....	.....	.....
3	East Capitol street, between Tenth and Eleventh SE.	54	.....	.....	279	85
5	East Capitol street, between Eighth and Ninth SE.	22	.....	.....	283	.....
18	Kingman street, between P and Q and Thirteenth and Fourteenth NW.	30	.....	.....	185	.....
50	A street, between Second and Third NE.	27	.....	145	226	.....
27	B street, between Third and Fourth SE.	.....	.....	.....	88	.....
10	G street, crossing Four-and-a-half street SW.	.....	.....	.....	.....	.....
33	H street, between Eighth and Ninth NW.	.....	.....	.....	.....	.....
28	I street, between Eighth and Ninth NE.	6	.....	.....	.....	79
30	I street, between North Capitol and First NW.	45	.....	.....	277	3
35	I street, between Seventh and Eighth NW.	12	.....	.....	161	.....
36	I street, between Sixth and Seventh, and Seventh, between I and Virginia avenue.	69	.....	.....	161	339
32	I street, between North Capitol and First NW.	39	.....	.....	131	.....
40	L street, between North Capitol and First NW.	.....	.....	.....	.....	.....
38	N street, between Nineteenth street and Connecticut avenue NW.	6	.....	.....	.....	304
1	P street, between New Jersey avenue and Fifth street NW.	42	.....	171	184	36
11	P street, between Eighteenth and Dupont Circle, and Circle between P and New Hampshire avenue NW.	.....	.....	.....	.....	376½
20¹	P street, between Fourth and Fifth NW.	.....	.....	.....	.....	.....
19	T street, between Eighth and Ninth NW.	93	.....	.....	24	57
25	Second street, crossing Massachusetts avenue NW.	.....	.....	.....	21	.....
42	Second street, between Massachusetts avenue and H street NW.	15	.....	.....	191	.....
43	Second street, between F and G NW.	30	27	.....	.....	6
12	Third street, crossing C SW.	.....	.....	.....	.....	9
26	Fourth street, between A and B SE.	.....	.....	.....	6	141
9	Four-and-a-half street, between F and G SW.	30	.....	12	601	.....
34	Fifth street, between S and Rhode Island avenue NW.	.....	.....	.....	.....	.....
17	Eighth street between L and M SE.	45	.....	.....	6	.....
52	Eighth and H streets NE. (NE. corner) ..	.....	.....	.....	.....	.....
6	Ninth street, between East Capitol and A SE.	.....	.....	.....	139	.....
23	Ninth street, between Q street and Rhode Island avenue NW.	9	.....	.....	.....	.....
31	Ninth street, between T street and Florida avenue NW.	39	.....	.....	398	.....
8	Eleventh street, between F and Water SW.	.....	.....	21	30	.....
53	Twelfth street, between C and Virginia avenue SW.	21	.....	.....	266	.....
37	Fifteenth street, between P and Q NW.	24	.....	.....	.....	18
16	Nineteenth street, between M and N NW.	21	.....	.....	.....	.....
41	Twenty-first street, between C street and Virginia avenue NW.	72	.....	.....	.....	.....
2	Twenty-eighth street, between Dunbarton and O NW (W. side).	21	.....	.....	270	.....
4	Twenty-eighth street, between Dunbarton and O NW (E. side).	.....	.....	107	.....	.....
13	Alley, square 151.	.....	.....	384	456	.....
21	Alley, square 242.	75	.....	.....	372	178
7	Alley, square 677.	87	.....	.....	.....	93½
24	G street, between Four-and-a-half and Sixth SW.	41	.....	.....	222	81
	Total.....	1,024	27	852	5,352	1,806

¹ Relaying pipe.

² Includes \$8.11 for repairs to water mains.

sewer appropriations, fiscal year 1895.

## AND REPLACING OBSTRUCTED SEWERS.

Pipe sewers laid (length in feet).			Total relaid.	Manholes built.	Basins built.	Branches used.	Cost of materials.	Cost of labor.	Total cost.
18-inch.	21-inch.	24-inch.							
			<i>Lin. feet.</i>						
			355	2		5	\$92.90	\$411.13	\$504.03
			470	3		10	154.93	610.59	765.52
140			177			4	94.12	312.26	406.38
			364	2		12	137.50	614.54	752.04
87			371	3		11	174.65	653.47	828.12
			190			16	60.78	245.52	306.30
			380	3		13	140.44	292.31	432.75
			97				38.22	111.26	149.48
	66		67.5	1			62.19	147.61	210.00
	279		287	4		15	258.57	377.13	633.69
			294			5	77.42	373.14	450.56
48			625	4		5	195.14	1,063.91	1,259.05
			170	1		7	61.91	129.52	191.43
			500	2		13	230.68	787.52	1,018.20
			216	1		7	74.08	746.54	820.62
	170		172	1		1	121.82	341.12	462.94
			310	2		2	133.68	465.30	598.98
54			579.2	1		17	156.85	655.00	811.85
			379	2			161.70	575.97	737.67
								6.55	6.55
255			340	2		9	190.71	656.75	847.46
150			172	1			87.31	340.19	427.50
			196	1		4	64.34	247.44	311.78
368			370	3		13	259.61	772.89	1,032.50
			9				4.30	18.74	23.04
	75		263			1	115.37	418.63	534.00
			613	4		32	234.77	685.46	920.23
332			332	3		4	219.15	* 756.55	975.70
344			353	2		13	215.83	658.78	874.61
		15	15				11.53	25.36	36.89
			145			4	35.33	212.56	247.89
137			138	1		1	69.95	251.02	320.97
			431	3		19	146.29	458.25	604.54
			51	1			22.04	79.11	* 101.15
			270			7	95.22	227.48	322.70
121			479	4		8	188.08	829.15	1,017.23
573			581	4		6	348.53	1,313.25	1,661.78
	204	388	604	1		2	472.17	1,186.03	1,658.20
			270	3		9	78.65	* 336.34	414.99
			107	1		7	34.22	158.62	192.84
			840	3		45	262.78	632.54	895.32
			667	7		32	318.07	1,259.71	1,577.78
358			541	4	2	37	324.32	1,047.97	1,372.29
			521	3		24	195.68	742.26	937.94
2,967	794	403	14,311.7	83	2	420	6,419.83	22,235.66	28,655.49

\* Making sewer connections.

\* Includes \$3.50 for repairs to service pipe.

*Work done by day labor under various*

TABLE 8.—APPROPRIATION FOR

No. of order.	Location.	Pipe sewers laid (length in feet).							
		6-inch.	8-inch.	10-inch.	12-inch.	15-inch.	18-inch.	21-inch.	24-inch.
22	Florida avenue and Brentwood road .....			39					
2 <sup>1</sup>	Kentucky avenue, between Pennsylvania and Georgia SE.				165	15			
7	North Carolina avenue, between First and Second streets SE.					246			
63	New Hampshire avenue and Twenty-first street NW.			18					
68	New York avenue, between Twenty-first and Twenty-second streets NW.					633			
3 <sup>1</sup>	Pennsylvania avenue, between Fifteenth street and Kentucky avenue SE.						276		
18	Pennsylvania and Kentucky avenues SE.					4	15		
33	Do .....						57		
34	Pennsylvania avenue and Fifteenth street SE.		59						
55	South Carolina avenue, between Fourteenth and Fifteenth streets SE.								
45	Vermont avenue and Tenth street NW.			81					
15	South Capitol and D streets .....					69			
53	Valley street, between P and U NW.				54				
62	A and Fourteenth streets SE.				39				
24 <sup>1</sup>	B street, between Sixth and Seventh SE.								
10	C street, between Fourteenth street and Kentucky avenue SE.								
19	C street, between Kentucky avenue and Thirteenth street SE.								
5 <sup>1</sup>	D street, between Twenty-sixth and River, and Twenty-sixth between D and E NW.			27					
1 <sup>1</sup>	E street, between Twenty-sixth and River NW.								93
30	E street, between Eleventh and Twelfth NE.						345		
56	L street, between Second and Third NE.					210			
23	M street, between Fourth and Fifth NE.						327		
31	M street, between Eighteenth and Nineteenth NW.		21						
25	Seventh street, between I and K NE.						243	201	
46	Eighth and F streets SW. (NW. corner)			12					
28	Tenth street, between D and E NE.					159			
29	Tenth and D streets NE. (SE. corner)			3					
37	Twelfth and D streets SE. (NE. corner)			6					
39	Twelfth and C streets SE. (NE. corner)			54				54	
40	Twelfth and Walter streets SE. (NE. corner)			3					
41	Twelfth and B streets SE. (NE. corner)			3					
66	Twelfth and C streets SE.			91					
26	Thirteenth street, between C street and South Carolina avenue SE.								
36	Thirteenth and C streets and Tennessee avenue and C street NE.			60					
43	Thirteenth and V streets NW. (SW. corner)			15					
81	Fourteenth street, between C and South Carolina avenue SE.				30				
4 <sup>1</sup>	Fifteenth street, between Pennsylvania and Georgia avenue SE.			201	135				
8	Fifteenth and W streets NW. (NE. corner)			60					
44	Fifteenth and D streets NW.			54					
47	Fifteenth and D streets NE.			42					
43	Fifteenth and C streets NE. (SW. corner)			18					
49	Fifteenth and E streets NE.			45					
50	Fifteenth and F streets NE. (SW. corner)			30					
69	Fifteenth street, between South Carolina avenue and B street SE.								
70	Fifteenth and B streets SE.			66					
6	Twenty-sixth street, between E and F NW.						243		
76	Thirty-second and Q streets NW. (SW. corner).			12					
75	Thirty-third and Q streets NW. (NE. corner).			24					
20	Thirty-fifth and Q streets NW. (NW. corner).			6					
21	Thirty-fifth and S streets NW. (NE. corner)			27					

<sup>1</sup> Work began in fiscal year 1894.<sup>2</sup> Includes \$117.40 for inspection.<sup>3</sup> Includes \$153.27 for inspection.<sup>4</sup> Includes \$78.26 for inspection.<sup>5</sup> Includes \$4.25 for repairs to water main.<sup>6</sup> Includes 94 cents for repairs to service pipe.

*sewer appropriations, fiscal year 1895—Continued.*

## MAIN AND PIPE SEWERS.

24-inch concrete sewer.	2 by 3 feet con- crete sewer.	2.75 feet diameter, brick.	Manholes built.	Basins built.	Branches used.	Cost of materials.	Cost of labor.	Total cost.
				1		\$29.25	\$49.88	\$79.13
			1			64.23	289.97	354.20
			2			122.21	359.68	481.89
				1		34.74	44.25	78.99
			3			273.38	645.90	919.28
			2			159.21	370.50	529.71
		9.25	1			45.14	264.06	309.20
				2		76.21	234.22	310.43
				1		23.46	62.87	86.33
500			3			256.91	<sup>2</sup> 1,334.21	1,591.12
				1		48.91	88.80	137.71
			1			43.10	154.59	197.69
						11.98	52.70	64.68
				2		71.79	96.00	167.79
			1			7.21	34.35	41.56
	325.18		1			363.86	<sup>3</sup> 1,349.09	1,712.95
419			2			229.38	<sup>4</sup> 1,050.39	1,279.77
				1		28.05	27.85	55.90
			1			115.94	<sup>5</sup> 339.64	455.58
			2			187.82	474.32	662.14
			1			86.37	240.72	327.09
			2			179.72	339.94	519.66
				1		18.65	35.69	54.34
			2			282.75	<sup>6</sup> 659.97	942.72
				1		34.86	57.94	92.80
			2			90.61	167.79	258.40
				1		18.51	36.93	55.44
			1			61.17	100.12	161.29
				1		27.14	60.00	87.14
				1		16.09	29.37	45.46
				1		12.30	33.38	45.68
				2		54.43	123.81	178.24
173.3			1			91.35	<sup>7</sup> 409.92	501.27
				2		76.04	82.81	158.85
				1		20.44	41.75	62.19
						7.87	22.73	40.60
			2		12	113.77	385.94	499.71
				1		29.85	82.70	112.55
				2		42.21	87.34	129.45
				2		71.09	115.18	186.27
				1		35.84	58.93	94.77
				2		73.08	85.56	158.64
				1		39.44	43.25	82.69
248.1			2			139.33	<sup>8</sup> 788.72	928.05
				2		41.50	<sup>9</sup> 265.82	307.32
			2			159.16	661.26	820.42
				1		32.61	38.60	71.11
				1		35.19	46.23	81.52
				1		21.62	41.63	63.25
				1		25.47	52.47	77.94

<sup>7</sup> Includes \$29.35 for inspection.<sup>8</sup> Includes \$114.78 for inspection.<sup>9</sup> Includes \$69.50 for inspection.



*Work done by day labor under various*

TABLE 8.—APPROPRIATION FOR

No. of order.	Location.	Pipe sewers laid (length in feet).							
		6-inch.	8-inch.	10-inch.	12-inch.	15-inch.	18-inch.	21-inch.	24-inch.
32	Thirty-seventh and Prospect streets NW. (NE. corner).....			30					
11	Alley, reservation D.....			3					
74	Alley, reservation 11.....	11							
79	Alley, square 157.....			6					
78	Alley, square 210.....			3					
59	Alley, square 231.....					259			
58	Alley, square 242.....		6						
77	Alley, square 754.....				183				
52	Alley, square 774.....		44						
51	Alley, square 1052.....								
65	M and Madison streets NW. (NW. corner).....			21					
9	N street, between Delaware avenue and Canal SW.....					219	177		
54	N street, between Twenty-third and Twenty-second NW.....							150	
16	Q street, between Eighteenth street and New Hampshire avenue NW.....			3					
17	R street, between Thirty-fourth and Thirty-fifth NW.....					327			
12	First and O streets SW.....			33					
13	Fourth street between L and M NE.....							690	
35	Fourth and I streets NE.....			15					
57	Fourth and I streets NE. (SW. corner).....								
14	Seventh street, between H and I NE.....								297
	Total.....	11	130	1,204	513	2,141	1,683	1,095	390

TABLE 9.—APPROPRIATION

No. of order.	Location.	Pipe sewers laid (length in feet).		
		10-inch.	12-inch.	15-inch.
13	Connecticut avenue at California avenue.....	54		
14	Connecticut avenue at Le Roy place.....	9		
15	Connecticut avenue at Bancroft place.....	9		
16	Connecticut avenue at Florida avenue.....	36		
24	Howard avenue, between Center and Brown streets.....		184	
6	Howard avenue, between Fourteenth and Center streets.....	27		
8	Navy avenue and Shannon place (SW. corner).....	18		
12	Superior and Central avenues and Superior and Ontario avenues.....			42
174	Sheridan avenue crossing Brightwood avenue, and Brightwood avenue, between Sheridan and Whitney avenues.....			280
21	Bladensburg and Bennings roads.....			
3	Center street, between Howard avenue and Fourteenth street.....			
5	Fillmore street, between Washington and Jefferson.....			
7	Fillmore street, between Jefferson and Pleasant, and Pleasant, between Fillmore and Valley.....			
19	Harrison street, between Nichols avenue and Fillmore street.....		15	102
11	Kenyon street, between Thirteenth and Fourteenth streets NW.....			151
4	Rock Creek Church road and Eighth street extended.....		30	
1	Spring road and Thirteenth street extended.....	33		
9	Valley and Pleasant streets.....	54		
18	Wilson and Fifth streets NW. (NE. corner).....	21	48	
20	T street, between First street and Le Droit avenue NW.....	3		
229	First street, near Rhode Island avenue NW.....			
23	First and Seaton streets NW.....		12	
24	First and Rhode Island avenue NW.....		9	
25	First and U streets NW.....		9	
10	Block 10, Reno subdivision.....			156
	Total.....	264	307	731

<sup>1</sup> Includes \$3.75 for repairs to water main.<sup>2</sup> Changing manhole frame, etc.<sup>3</sup> Includes \$2 for repairs to service pipe.<sup>4</sup> Work begun in fiscal year 1894.<sup>5</sup> Includes \$1.31 for repairs to service pipe.

sewer appropriations, fiscal year 1895—Continued.

MAIN AND PIPE SEWERS—Continued.

24-inch concrete sewer.	2 by 3 feet con- crete sewer.	2.75 feet diameter, brick.	Manholes built.	Basins built.	Branches used.	Cost of materials.	Cost of labor.	Total cost.
				1		\$27.23	\$52.12	\$79.35
				1		19.69	34.24	53.93
			1	3		50.86	86.99	137.85
				1		14.55	22.69	37.24
				1		16.16	31.13	47.29
			2		2	133.44	341.30	474.74
				1		11.75	13.02	24.77
			2	1		114.80	353.10	467.90
				1	1	7.47	32.55	40.02
				1		15.15	23.87	39.02
				1		20.50	45.13	65.63
			2		9	188.22	343.66	531.88
			1		6	120.70	213.61	334.31
				1		15.38	26.87	42.25
			2			152.17	298.06	450.23
				1		23.94	53.00	76.94
			4			495.47	763.66	1,259.13
				3		47.23	111.38	158.61
						5.07	1.76	6.83
			2			266.19	334.19	600.38
1,340.4	325.18	9.25	51	52	30	5,877.11	15,710.10	21,587.21

FOR SUBURBAN SEWERS.

Pipe sewers laid (length in feet).			24-inch concrete sewer.	Manholes built.	Basins built.	Branches used.	Cost of materials.	Cost of labor.	Total cost.
18-inch.	21-inch.	24-inch.							
					1		\$22.60	\$52.06	\$74.66
					1		13.23	37.00	50.23
					1		13.40	37.52	50.92
					1		19.77	41.25	61.02
				2		5	85.45	168.93	254.38
					2		45.02	92.25	137.27
					1		24.17	43.38	67.55
21					2		86.82	90.83	177.65
		66		2		5	186.71	370.18	556.89
6					1		31.28	27.81	59.09
		162	5	1			29.10	117.17	146.27
				1			144.25	364.00	508.25
	450			2		12	322.84	764.81	1,087.65
144				1	4	3	229.98	432.33	662.31
211	225			3		7	339.25	803.58	1,142.83
					1		25.62	56.49	82.11
					1		26.06	61.99	88.05
					2		49.46	102.12	151.58
				1	1		60.33	125.55	185.88
					1		34.24	45.17	79.41
					1		41.65	61.49	103.14
					1		33.77	35.70	69.47
					1		33.45	30.60	64.05
					1		36.14	35.88	72.02
				2			91.50	207.87	299.37
382	675	228	5	15	23	32	2,026.09	4,205.96	6,232.05

\* Includes \$16.30 for inspection.

† Includes \$35.87 for inspection.

\* Includes \$61.96 for inspection.

\* Constructing concrete wall.

*Work done by day labor under various*

TABLE 10.—WORK PERFORMED BY DAY LABOR UNDER MIS

No. of job.	Location.	Pipe sewers laid (length in feet).					3-inch lead connection.
		8-inch.	10-inch.	12-inch.	15-inch.	18-inch.	
							<i>Feet.</i>
1	Connecticut avenue, Rhode Island avenue and M street NW.					18	
9	Massachusetts avenue, between Seventeenth and Eighteenth streets NW.		87				
15	Massachusetts avenue, between Sixteenth and Seventeenth streets NW.		21				
26	New York avenue and Tenth streets NW. (NE. corner).			3			
4	Rhode Island avenue east of Connecticut avenue NW.		3				
29	Dupont Circle NW (east line).....						
36	Dupont Circle at intersection Connecticut avenue and Nineteenth street NW.		24				
27	I street, between Thirteenth and Fourteenth NW.		63				
16	Twentieth street, between O and Massachusetts avenue NW.		24				
10	Canal street, between B and C SW.....						
42	New Jersey and North Carolina avenues SE. (NE. corner).		3				
43	South Capitol and E streets SE. (NE. corner).		18				
17	D street, between Ninth street and Kentucky avenue SE.						
33	First street and North Carolina avenue SE. (NE. corner).		9				
40	First street and North Carolina avenue SE. (NE. corner).		15				
41	First street and North Carolina avenue SE. (SE. corner).						
7	Tenth and D streets SE.....		3				
2	Twelfth street between Pennsylvania avenue and Lincoln Park SE.		3				
21	Twelfth and C streets SE. (SE. corner)...		6				
14	Fourth street, between H and K NE.....						
32	Eleventh and I streets NE.....		9				
39	Fifteenth and T streets NW. (NW. corner).		27				
18	Thirty-second street, between M and N NW.		36				
19	Eighteenth street, between California and Wyoming avenues.		57				
28	Eighteenth street and Columbia road.....		18				
23	M street and Trinidad avenue NE.....		3				
3	Twelfth and East Capitol streets NE.....						
22	Thirteenth and Clifton streets NW. (NE. corner).		3				
30	First street, between K and L NW.....		21				
31	Eleventh and E streets NW.....		45				
24	Fifteenth and G streets, and Fifteenth and Maryland avenue NE.						
34	D street, between Eighth and Ninth NW.		6				
8	Block 11, Reno subdivision.....				174		
25	I street, between North Capitol and First NW.						14
12	Four-and-a-half and L streets SW.....	3					52
38 C	Sixth street and Pennsylvania avenue SE.						26
36 D	Sixth and East Capitol streets SE.....						31
36 E	Sixth street and Maryland avenue NE. (SE. corner).						7
36 F	Sixth and N streets NW.....						33
38 A	Tenth and D streets SW.....						22
38 B	Eleventh street and Maryland avenue SW.						52

<sup>1</sup> Adjusting manholes.<sup>2</sup> Adjusting basin.<sup>3</sup> Adjusting basins and manholes.

sewer appropriations, fiscal year 1895—Continued.

## CELLANEOUS APPROPRIATIONS IN THE FISCAL YEAR 1895.

Solder used.	Manholes built.	Basins built.	Cost of materials.	Cost of labor.	Total cost.	Appropriation.
<i>Pounds.</i>						
		2	\$38.92	\$86.42	\$125.34	Repairs to pavements, 1895.
		3	68.23	143.99	212.22	Do.
	1	1	35.35	69.50	104.85	Do.
		1	35.99	46.34	82.33	Do.
		1	17.88	42.62	60.50	Do.
		1	31.24	26.06	57.30	Do.
		1	37.48	38.13	75.61	Do.
		4	67.11	159.97	227.08	Do.
		3	96.58	105.30	201.88	Do.
	( <sup>1</sup> )		.40	8.75	9.15	Improvement sand repairs, SW. section, 1895.
		1	31.79	27.35	59.14	Improvements and repairs, SE. section, 1895.
		1	34.14	35.76	69.90	Do.
	( <sup>1</sup> )		.59	6.38	6.97	Do.
		1	32.45	25.78	58.23	Do.
		1	33.65	32.75	66.40	Do.
		( <sup>2</sup> )	3.94	11.74	15.68	Do.
		2	24.30	65.23	89.53	Do.
	( <sup>3</sup> )	( <sup>3</sup> )	55.59	154.29	209.88	Do.
		1	11.97	33.63	45.60	Do.
	( <sup>3</sup> )	( <sup>3</sup> )	.79	9.92	10.71	Improvements and repairs, NE. section, 1895.
		1	32.45	26.24	58.69	Do.
		1	36.71	37.91	74.62	Improvements and repairs, NW. section, 1895.
	2	2	72.79	150.90	223.69	Improvements and repairs, Georgetown, 1895.
		4	56.19	117.24	173.43	Improving Eighteenth street extended, 1895.
		2	27.68	70.24	97.92	Do.
		1	10.66	24.47	35.13	Improving M street extended, 1895.
	( <sup>3</sup> )	( <sup>3</sup> )	1.02	19.36	20.38	Paving streets north side Lincoln square, 1895.
		1	13.10	29.13	42.23	Repairs to county roads, 1895.
		1	16.98	21.74	38.72	Current repairs, streets, avenues, and alleys, 1895.
		2	70.61	93.34	163.95	Do.
		( <sup>2</sup> )	4.58	16.99	21.57	Do.
		2	68.69	463.73	132.42	Do.
	1		91.78	207.85	299.63	Extension of high-service system water distribution, 1895.
8		<sup>5</sup> 1	68.73	101.55	170.28	Automatic siphons, 1895.
		<sup>5</sup> 2	54.41	111.84	166.25	Do.
3		<sup>5</sup> 1	74.01	61.04	135.05	Do.
4		<sup>5</sup> 1	74.12	71.72	145.84	Do.
3		<sup>5</sup> 1	64.21	66.68	130.89	Do.
3		<sup>5</sup> 1	68.57	61.49	130.06	Do.
3		<sup>5</sup> 1	68.76	57.00	125.76	Do.
5		<sup>5</sup> 1	76.81	57.81	134.62	Do.

<sup>1</sup>Includes \$12 cost of repairs to awning frame.<sup>5</sup>Flushing basin.<sup>6</sup>Flushing basin; siphons furnished free of costs to District.

*Work done by day labor under various*

TABLE 10.—WORK PERFORMED BY DAY LABOR UNDER MIS

No. of job.	Location.	Pipe sewers laid (length in feet).					4-inch lead connection.
		8-inch.	10-inch.	12-inch.	15-inch.	18-inch.	
38 G	Thirteenth and O streets NW.....						<i>Feet.</i> 5
39 H	Twentieth and P streets NW.....						7
13	Twenty-first street and Massachusetts avenue NW.....		9				7
20	Various locations.....						1, 139
37	H street, between North Capitol and First NW.....		24				
44	Florida avenue and Brentwood road.....						
45	Eleventh and G streets NE.....			60			
	Total.....	3	537	63	174	18	1, 395
	Q street, between Sixth and Seventh NW.....						

<sup>1</sup> Flushing basin.<sup>2</sup> Connecting flushing basins with water mains.<sup>3</sup> Includes \$153 for taps of water mains.

*sewer appropriations, fiscal year 1895—Continued.*

CELLANEOUS APPROPRIATIONS IN THE FISCAL YEAR 1895—Continued.

Solder used.	Manholes built.	Basins built.	Cost of materials.	Cost of labor.	Total cost.	Appropriation.
<i>Pounds.</i>						
5	.....	11	\$66.64	\$62.63	\$129.27	Automatic siphons, 1895.
4	.....	11	66.37	60.81	127.18	Do.
	.....	11	65.37	70.03	135.40	Do.
96	.....	( <sup>2</sup> )	\$350.73	241.27	592.00	Do.
	.....	1	37.73	51.99	89.72	Improvements and repairs, NW. section, 1896.
	.....	( <sup>4</sup> )	.42	3.56	3.98	Improvements and repairs, NE. section, 1896.
	.....	2	78.00	107.33	185.33	Do.
134	4	<sup>5</sup> 56	2,376.51	3,195.80	5,572.31	
			1.08	27.12	<sup>6</sup> 28.20	

<sup>4</sup> Adjusting basin top.

<sup>5</sup> 12 flushing basins constructed; 28 basins reconstructed.

<sup>6</sup> Repairing service pipes, charge to retain due Hussey & Brown on contract No. 1900, appropriation for relief sewers and replacing obstructed sewers, 1894.



TABLE 11.—*Cost per linear foot of sewers constructed in the fiscal year 1895.*

## APPROPRIATIONS FOR MAIN AND PIPE, SUBURBAN, ASSESSMENT AND PERMIT WORK, AND WHOLE COST.

[Figures in roman indicate work done by day labor; figures in bold face indicate work done under contracts.]

Size.	Number of feet laid.	Allowance to contractor.	Inspection.	Material.	Labor.	Total.	Average cost, 1894.
8-inch pipe .....	1,804	.....	.....	\$0.377	\$0.807—	\$1.184	\$1.014
10-inch pipe .....	8,467	.....	.....	.316—	.776+	1.092	1.257
12-inch pipe .....	16,871	.....	.....	.358—	.894—	1.252	1.366
15-inch pipe .....	5,496	.....	.....	.468—	1.169—	1.637	1.777
15-inch pipe .....	656.5	<b>\$1.188+</b>	<b>\$0.228—</b>	.345—	.....	1.761	.....
18-inch pipe .....	5,170	.....	.....	.544—	1.316+	1.860	2.275
18-inch pipe .....	796.2	<b>1.41</b>	<b>.117—</b>	.438+	.....	1.965	.....
21-inch pipe .....	1,956	.....	.....	.689—	1.385+	2.074	2.605
21-inch pipe .....	956.3	<b>1.46+</b>	<b>.233+</b>	.499—	.....	2.192	.....
24-inch pipe .....	618	.....	.....	.939—	1.875+	2.814	3.082
24-inch pipe .....	989.5	<b>1.67+</b>	<b>.18+</b>	.755—	.....	2.605	.....
24-inch concrete .....	1,340.4	.....	.....	.535—	2.672—	3.187	.....
2 by 3 feet, egg shape .....	325.18	.....	.....	1.119—	4.149—	5.268	4.75
2 by 3 feet, egg shape .....	920.3	<b>3.113—</b>	<b>.426+</b>	1.142+	.....	4.681	.....
2.25 by 3.375 feet, egg shape .....	1,484	<b>3.558—</b>	<b>.634—</b>	1.339—	.....	5.531	6.199
2.5 by 3.75 feet, egg shape .....	1,264.3	<b>3.808+</b>	<b>.71+</b>	1.402+	.....	5.92	8.029
2.75 by 4.125 feet, egg shape .....	740.7	<b>4.642+</b>	<b>1.046+</b>	1.732—	.....	7.42	7.337
3 by 4.5 feet, egg shape .....	440.5	<b>3.999—</b>	<b>.886—</b>	1.574+	.....	6.459	7.669
3.25 by 4.875 feet, egg shape .....	1,086.7	<b>4.213—</b>	<b>.935+</b>	1.662+	.....	6.81	7.711
4 feet, diameter .....	272.1	<b>4.43+</b>	<b>1.12+</b>	1.223—	.....	6.773	7.208

## BASINS AND CONNECTIONS CONSTRUCTED BY DAY LABOR.

8-inch pipe connection .....	158	.....	.....	\$0.377	\$0.647	\$1.024	.....
10-inch pipe connection .....	1,641	.....	.....	.316	.616	.932	.....
12-inch pipe connection .....	306	.....	.....	.358	.734	1.092	.....
15-inch pipe connection .....	144	.....	.....	.468	1.169	1.637	.....
18-inch pipe connection .....	339	.....	.....	.544	1.316	1.86	.....
21-inch pipe connection .....	54	.....	.....	.689	1.385	2.074	.....
Basins .....	88	.....	.....	19.333—	34.490+	53.832	.....

TABLE 12.—Number of overseers, inspectors, and other employees of the sewer and property divisions temporarily required, and appropriations from which paid for the year ended June 30, 1895.

Class.	Num-ber em-ployed.	Cleaning and re-paring sewers and basins.	Relief sewers and re-plac-ing ob-structed sewers.	Main and pipe sewers.	Suburban sewers.	Main in-tercept-ing sewer.	Rock Creek in-tercept-ing sewer.	Auto-matic siphons.
Inspectors .....	16	\$47. 12	\$1, 852. 82	\$2, 251. 34	\$533. 98	\$1, 533. 04	\$867. 29	\$583. 44
Foremen .....	14	6, 337. 28	1, 448. 50	1, 154. 37	212. 62	4. 00	136. 50	146. 50
Other employees .....	452	33, 500. 80	21, 109. 15	15, 601. 06	3, 874. 98	1, 438. 09	1, 250. 73	496. 85
Total .....	482	39, 945. 20	24, 410. 47	19, 066. 77	4, 621. 58	2, 971. 13	2, 122. 02	1, 226. 79

Class.	Gauging sewers and rain-fall.	Assessment and permit work.	Current re-pairs to streets, ave-nues, and alleys.	Repairs to pave-ments.	Paving streets north and south of Lincoln Square.	Improve-ment and re-pairs streets and avenues.	Improv-ing Eight-centh street extended.
Inspectors .....		\$899. 00	\$16. 00	\$4. 00		\$164. 00	
Foremen .....		2, 249. 00	19. 75	136. 25	\$4. 00	160. 22	\$24. 50
Other employees .....	\$1, 705. 14	32, 591. 68	221. 80	585. 77	5. 24	1, 455. 53	162. 98
Total .....	1, 705. 14	35, 739. 68	357. 55	726. 02	9. 24	1, 779. 75	197. 48

Class.	Repairs to county roads.	Deposits.	Plumbers' assess-ment fund.	Construc-tion and repair of bridges.	Replac-ing curbs and side-walks.	Con-struct-ing county roads.	Exten-sion high-service system of water distribu-tion.	Total.
Inspectors .....		\$28. 68						\$8, 780. 71
Foremen .....	\$2. 00	135. 12					\$12. 75	12, 046. 86
Other employees .....	41. 38	1, 455. 63	\$87. 00	\$14. 70	\$39. 00	\$78. 00	195. 10	116, 130. 61
Total .....	43. 38	1, 619. 43	87. 00	14. 70	39. 00	78. 00	207. 85	136, 958. 18

## REPORT OF THE INSPECTOR OF PLUMBING.

WASHINGTON, D. C., July 30, 1895.

MAJOR: I have the honor to submit the following report upon the operation of the division of inspection of plumbing for the fiscal year ended June 30, 1895:

Until November 21, 1894, this bureau was under the direction, as it had been from its inception, of the late Samuel A. Robinson. The responsibilities of its conduct having, since his death, and in accordance with his recommendation to the Commissioners, devolved upon me, it is fitting that I express in this formal record both my appreciation of his noble character as a man and the great value and lasting effect of his labors as an official for the conservation of the health of this community. The advances made by this office under his administration and the increased estimation of its importance as a factor in the public welfare will always testify more strongly than can any words to the faithfulness and wisdom with which he discharged his duties.

The record of inspection of plumbing during the period covered by this report shows a slight increase over the amount stated last year, with no increase in the force employed, and comprises 5,789 inspections, of which number 1,054 were examinations of existing plumbing, 2,118 inspections or proving new work, 2,508 inspections of remodeling or repairs, and 109 peppermint tests not otherwise counted. This record, as has been customary, includes only, both for new and old work, such inspections as demand tests, approval, or other formal action, and intentionally excludes numerous calls made by the inspector to secure information as to the progress or character of the various jobs. It is desirable, as was often urged by Mr. Robinson, that the scope and completeness of the records of this office should be extended.

The established practice of my predecessor has been followed in the close scrutiny of plans for plumbing, in the character of inspections made, in the methods of examination and testing employed, and in the interpretation and application of the regulations, with a single noteworthy extension of the previous usages. It was found



that in the issuance of permits for remodeling of buildings or for adding apartments to contain plumbing fixtures there had been no concerted action between the office of the inspector of buildings and this office. Such a lack of coordination resulted oftentimes in violations of the plumbing regulations or the construction of ill-arranged or unprotected plumbing. In order to correct this defect of practice it has been agreed that no permit will be issued for building work in which an alteration or extension of the plumbing system is proposed without securing the antecedent approval of this office. In many cases a mere statement of the plumbing work intended to be done is accepted. Sometimes an inspection of the premises is made to insure an accurate knowledge of the conditions to be met, and in important cases plans and specifications are required to be filed.

The reconstruction of antiquated and defective plumbing is still constantly in progress and is stimulated by a well-grounded objection in the public mind to the presence and use of unventilated, foul, and often leaky pipes and fixtures, which contrast so unfavorably in convenience and cleanliness with modern plumbing appurtenances. The substitution of an entirely new system of plumbing extending from the main sewer to all the fixtures frequently results from the disclosure of grave defects existing in the old work.

The steady extension of the public sewers and water mains has afforded these facilities to many premises not thus favored heretofore, and the opportunity to introduce a water supply combined with house sewerage has been quite fully improved by the owners affected. It seems preeminently necessary that the main sewers be extended into suburban districts at a rate of progress at least equal to that at which water mains are advanced. If this be not accomplished, the copious use of water without adequate means for the removal of the foul wastes will result here, as so notably elsewhere, in a permanent and dangerous pollution of the soil.

This office has recently had occasion to consider and investigate certain of the problems which are incidental to the forms of plumbing construction demanded for the sanitary service of large and high buildings, and it is certain that increased attention must, in the immediate future, be paid to the evolution of plumbing design and practice adapted to such structures.

The record of gas-fitting inspections shows an increase in the number of inspections from 1,080 during the fiscal year 1894 to 1,327 during the year just ended. The good results attained have continued to justify the establishment of a service of supervision over new gas piping construction. The feasibility of extending this service to include examination into the condition of gas pipes and fixtures in old buildings has been demonstrated by a limited experience in such inspections during the past few months. There is clearly no reason why defective keys or leaky joints or fixtures should be allowed to endanger health, and occasionally even life, without a vigorous attempt on the part of the constituted authorities to have such defects corrected. It is expected that the present force of this bureau will be able to accomplish certain good results along this line.

The assistant inspectors have manifested commendable zeal, fidelity, and discretion in the performance of their allotted duties as well as that spirit of accommodation which should characterize every public official. Their responsibility and exacting duties merit compensation at least commensurate with that provided for the discharge of similar duties in other departments of the District government.

The close association of the plumbing board with the administration of this office is deemed a sufficient reason for briefly noting herein the work it has thus far performed. The present board was constituted by the Commissioners on March 23, 1893, in accordance with the provisions of the new plumbing regulations which went into effect on the 15th of that month. It held seventy meetings prior to June 30, 1895, and has conducted 249 examinations into the qualifications of 202 original candidates for licensing as master plumbers and gas fitters, of whom four have been finally rejected as a result of failure in a third examination. This board has also considered in detail many important questions connected with the application of the regulations to our current practice, and has made valuable recommendations to the Commissioners respecting both the materials and methods of construction. It is but just to add that its actions have been impartial and without bias in favor of either persons or organizations. The members of the board have thus far received no salaries, but have devoted their time and energy to this service as a contribution to the cause of sound government and progressive sanitation.

Very respectfully,

CHAS. B. BALL,  
*Inspector of Plumbing.*

Maj. CHARLES F. POWELL,  
*Engineer Commissioner, District of Columbia.*  
(Through Capt. Lansing H. Beach.)

*List of licensed plumbers, July 1, 1895.*

Name.	Address.	Name.	Address.
Albinson, James E.	1722 14th street NW.	Keppel, John	17½ H street NE.
Anadale, J. A.	1234½ 9th street NW.	Kennedy & Schaeffer	306 Pa. avenue SE.
Anderson, James F.	304 B street SE.	Koehane, Dennis	1405 12th street NE.
Anderson, Wm. L.	662 Pa. avenue SE.	Koch, Wm.	724 13th street NW.
Artz, Samuel	3007 M street NW.	Krause, John	1020 18th street NW.
Ashton, Geo. W.	702 E street SW.	Lanahan, J. B.	321 H street NE.
Atchison, Julius I.	1316 14th street NW.	Lansdale, E. G.	1235 28th street NW.
Barnard, Edward	807 18th street NW.	Lockhead, Chas.	3027 M street NW.
Barrick, Chas. E.	212 13½ street SW.	Lockhead, James	1404 Pa. avenue NW.
Beuter, Max A.	606 D street NW.	Loughery, Robert G.	1527 K street NW.
Bond, J. D.	117 Pa. avenue NW.	McAvoy, G. F.	1332 H street NW.
Bontz & Stutz	1100 Q street NW.	McAvoy, John N.	1917 17th street NW.
Bouis, Wm. R.	505 11th street NW.	McBee, R.	1127 7th street NW.
Bounds, O. P.	Camden Station, Balto.	McMahon, J. J.	2326 H street NW.
Brill & Hayden	308 Pa. avenue NW.	Meyers, Edmund B.	1004 9th street NW.
Brooks, R. C.	620 D street NW.	Malsak, Geo. H.	711 13th street NE.
Brown, Thomas	240 14th street NW.	Marsden, F. L.	507 7th street SW.
Beuchler, R. A.	616 12th street NW.	Mills, R.	1207 11th street SE.
Betker, John K.	2104 Vt. avenue NW.	Mitchell, John	821 14th street NW.
Bussey, Walter	1214 2d street NW.	Moran, John	2126 Pa. avenue NW.
Campbell, William P.	437½ 10th street SW.	Musson, John W.	1405 Q street NW.
Campbell, R. G.	517 10th street NW.	Murphy, Daniel J.	1102 Conn. avenue NW.
Carmody, John	1241 6th street SW.	Niland, Patrick	2129 Ward place NW.
Caverly, Edward, & Co.	1424 N. Y. avenue.	Noonan, T. V.	1128 15th street NW.
Caverly, Robert B.	918 F street NW.	Nolan, James	721 14th street NW.
Clarke, James B.	1214 M street NE.	O'Brien, M. J.	317 4½ street NW.
Clark, Thos. C.	1220 5th street NW.	O'Donnell, D. A.	1248 7th street NW.
Connor, John M.	1542 9th street NW.	O'Hagan, James	1917 Pa. avenue NW.
Creamer, J. A., & Bro.	2200 11th street NW.	Power, John A., & Co.	430 10th street NW.
Cunningham, James	1408 Pa. avenue NW.	Pruitt, Norman	814 H street NW.
Daly, Frank & Co.	226 H street NW.	Purcell, James C.	721 4th street NE.
Daly, John	638 G street NW.	Quinter, Joseph R.	1414 R. I. avenue NW.
Daly, Peter	1122 H street NE.	Ragan, James	1503 Pa. avenue NW.
Davis & Kibbey	404 B street NE.	Reinburg & Carroll	417 13th street SE.
Dent, A. S.	816 19th street NW.	Reynolds, Wm.	1728 Pa. avenue NW.
Dessez, Chas. E.	720 17th street NW.	Roach, James	1318 Pa. avenue NW.
Devereaux & Gaghan	717 11th street NW.	Rodbird, John E.	136 G street NE.
Donaldson, T. S.	716 6th street SW.	Robertson, James P.	531 15th street NW.
Dorsett, C. A.	817 3d street SE.	Rothwell, Wm.	119 10th street NE.
Dougherty, W. W.	488 La. avenue NW.	Roy & Roy	646 E street SE.
Duffy, Wm.	1130 N. Capitol street.	Schaeffer, Geo. F.	223 D street NW.
Enright & Neumeyer	228 O street NW.	Schlosser, J. G., & Co.	441 G street NW.
Fingles, P. J.	805 6th street NW.	Shedd, S. S., & Bro.	432 9th street NW.
Fitzgerald, Richard	26 G street NW.	Shepherd, A. R.	913 N. J. avenue NW.
Foley, Thos. F.	1016 N. J. avenue NW.	Sherwood, S. H.	1207 7th street NW.
Flack, Wm. P.	505 H street NE.	Soper, B. Alfred	916 H street NW.
Gallagher, B. D.	471 D street SW.	Sparrow, Wm. A.	806 North Capitol street.
Garratt, C. S.	1727 7th street NW.	Slattery, Ed. D., jr.	1105 E street NW.
Goodall, Geo. W.	504 Md. avenue SW.	Spearing, S. J.	450 Pa. avenue NW.
Gorman, E.	124 B street NE.	Suit, James E.	1614 L street NW.
Goss, Wm. E.	321 Mo. avenue NW.	Suman, Jas. L.	664 Callan street NE.
Green, Geo. A.	418 Pa. avenue SE.	Sullivan, D. P.	822 20th street NW.
Gaghan, Michael	1121 7th street NW.	Sweet, Wm. T.	215 4½ street NW.
Hannan, Daniel	517 F street NW.	Thomas, Wm.	625 K street NW.
Hannan & Co.	1119 7th street NW.	Thomas & Dutton	1321 9th street NW.
Hannan, P. F.	1519 17th street NW.	Tompkins, Ed. H.	517 H street NE.
Hannan, Edward J.	517 11th street NW.	Thorn, Chas. G.	1213 F street NW.
Harper, J. W.	619 G street SW.	Tilp, Frederick	620 O street NW.
Harrison, Jas. T., & Son	603 Pa. avenue SE.	Umhau, C. F.	1714 7th street NW.
Harrison, James T., jr.	33 Monroe st., Anacostia.	Van Degrieff, Wm. P.	
Herbert, J. A.	418 East Capitol street.	Venable, Frank W.	916 4th street SE.
Hill & Prigg	1326 Q street NW.	Wall, Wm.	916 26th street NW.
Horan, J. F.	417 4½ street SW.	Ward, Wm. N.	1304 H street NW.
Healy & Bro.	1116 E street NW.	Waters & Poore	1261 32d street NW.
Hutchins, Geo. E.	1208 E street NW.	Whalen, Wm.	736 14th street NW.
Hurley, J. W.	713 D street NW.	Williamson, Donald S.	605 N. Y. avenue NW.
Hurney, Thos.	1838 14th street NW.	Work, W. J.	725 9th street NE.
Humphrey, Thos.	1335 F street NW.		



## REPORT OF PERMIT CLERK.

WASHINGTON, D. C., July 26, 1895.

MAJOR: I have the honor to submit the following as the operations of the permit clerk's office for the fiscal year ended June 30, 1895:

The permits issued during the year were—

Water connections.....	1,563	
Water repairs.....	1,403	
Water specials.....	292	
		3,258
Sewer connections.....	1,515	
Sewer repairs.....	991	
Sewer specials.....	243	
		2,750
Gas and electric light connections.....	802	
Gas and electric light repairs.....	281	
Gas and electric light specials.....	43	
		1,126
Lay and repair gas mains and electric conduits.....	72	
Erect and replace poles and posts.....	253	
Erect parking fences.....	237	
Erect awnings.....	23	
Build manholes.....	2	
Lay water main (Metropolitan Railroad Company).....	1	
Make excavations.....	26	
Connect and repair sewers (United States Government).....	2	
Lay and repair railroad tracks.....	14	
String wires.....	11	
Drive and haul across sidewalks.....	55	
Pave and repair sidewalks and parking leads.....	182	
Erect and repair safety gates and fences.....	3	
Repair parking fences.....	144	
Repair steps and copings.....	19	
Miscellaneous.....	142	
Permits to employees, District of Columbia.....	420	

Grand total..... 8,740

There has been an increase in both the amount paid for permits and the number of permits issued, as compared with the fiscal year ending June 30, 1894.

Permits issued during the fiscal year—

1893-94.....	8,064
1894-95.....	8,740

The following table shows the number of permits issued during the four preceding years and the amount of money paid the collector of taxes, District of Columbia, during that time:

Fiscal year.	Permits issued.	Fees paid.
1890-91.....	5,561	\$7,638
1891-92.....	9,456	8,631
1892-93.....	12,889	12,214
1893-94.....	8,064	7,024
1894-95.....	8,740	7,229

The increase in the amount of money paid is due principally to the large number of permits issued during the months of February and March for thawing out and repairing water-service pipes and for the erection of fences and railings around the parkings.

The work of the office is increased each year by the continued improvements of sidewalks and roadways in all sections of the District of Columbia. When the improved pavements are cut, or in any manner displaced by plumbers or other persons having permits to make excavations, a deposit is required to cover the cost of repairing them. In the case of the registered plumbers, they are required to make a deposit of \$50 with the collector of taxes, District of Columbia, and against this deposit is charged the costs of repairing the cuts made by them. The location is reported to the superintendent of streets weekly, and the repairs are made by the

employees of that department. When the amount charged against the account of the plumber amounts to \$40, he is notified by statement from this office, and must bring his deposit or balance to the original amount (\$50) before additional permits can be issued to cut the improved pavements. No permit to do any work contemplated by the plumbing regulations can be issued to any plumber who fails to settle his indebtedness after being notified from this office. The vouchers showing the cost of each cut repaired are paid by the auditor, District of Columbia, a copy of each deposit and repair cost being kept in this office.

Owing to the continued laying of underground electric-light, telegraph, and telephone wires in the roadways and sidewalks, the greatest care has to be exercised by the office to notify all persons having permits to make excavations of the location of such underground constructions, so as to protect them from being injured by the tools of the workmen.

All permits to make excavations to connect with or repair underground constructions are issued from this office. With the exception of work done by the employees of the District of Columbia, and special permits allowed by the plumbing regulations, or ordered by the Commissioners, a fee of \$1 is charged for each excavation made, this fee being paid to the collector of taxes and his receipt entered upon the application. The fees so paid are deposited in the United States Treasury, one-half to the credit of the District of Columbia and the other half to the United States. There seems no more reason why the United States should receive this fund than one-half of the other funds received for taxes, especially that received for water permits. The water department being self-sustaining, all moneys received from any source connected with it should be credited in full.

New branches of work have been added to the duties of this office during the past year, in addition to issuing all permits for connecting with and repairing sewer, water, gas, and electric-light mains and conduits, which has for years been the principal work of the office—work that was formerly done by the employees of the office of the inspector of buildings—has been transferred to the permit clerk's office. All parking railing and fences, hitching posts along the inner edge of the curb, hitching rings in the curb or in iron or stone blocks next the curb, clocks for keeping the time, and lamps showing white lights on or over the sidewalks, are issued according to the regulations of the engineer department, District of Columbia, from this office.

The tracings furnished this office of the sewerage system of the District of Columbia are kept posted at all times by employees of the sewer department, and are of great value in giving information to plumbers and the public generally as to the location, depth, and size of sewers.

In concluding my report, I wish to call attention to the fact that the courts have decided that the plumbing regulations are defective so far as any penalty is prescribed for making excavations in the avenues, streets, roads, alleys, or public spaces, and I would respectfully recommend that the attention of Congress be called to this defect, so that a penalty may be fixed and any unauthorized excavations be prevented.

Very respectfully,

H. M. WOODWARD,  
*Permit Clerk, District of Columbia.*

Maj. CHARLES F. POWELL,  
*Corps of Engineers, U. S. A.,*  
*Engineer Commissioner, District of Columbia.*

(Through Capt. Lansing H. Beach, Corps of Engineers, U. S. A., assistant to Engineer Commissioner.)

#### REPORT OF SUPERINTENDENT OF PROPERTY.

WASHINGTON, D. C., July 30, 1895.

SIR: I have the honor to submit the following report relative to material purchased on account of appropriation for 1894-95:

##### GRANITE CURBING.

Granite curbing to the amount of 34,558.57 feet was purchased, at a cost of \$27,322.79. These figures include the 6 by 20 inch, 8 by 8 inch, and 5 by 16 inch sizes. The latter is of an inferior grade, and was only purchased because of the near approach of the winter season. The prices were 74½ and 90 cents for 6 by 20 inch, 67½, 69, 70½, and 78 cents for the 8 by 8 inch, and 60 and 67½ cents for the 5 by 16 inch; the circular cost \$1.25 and \$1 per foot for the 6 and 8 inch, respectively. With the exception of 1,490 feet of the 5-inch curbing, the whole year's supply came from southern Virginia and North Carolina. The prices paid were the lowest at which curbing has been purchased in years.



Curbing to the amount of 2,026.25 feet of 8 by 8 inches were bought in open market, because of the failure on the part of the regular contractors to deliver as rapidly as required. The price paid was 78 cents per foot—7½ cents in excess of the regular contract price. This excess, amounting to \$151.97, was charged against the contractor.

#### GRANITE BLOCKS.

No contract was awarded for furnishing granite blocks. But one street was scheduled for this class of improvement. To meet its requirements, second-class and old blocks were purchased, at \$26 and \$18.50 per 1,000, respectively. By the exercise of care in culling and paving, these blocks have made good work.

#### VITRIFIED PAVING BLOCKS AND BRICKS.

During the past year paving blocks (9½ by 4 by 3½ inches) have largely supplanted the bricks formerly in use. The prices paid were \$22.80 and \$18 per 1,000, respectively. Both the blocks and bricks furnished during the year were Ohio River fire clay.

There were purchased, on account of 1894-95 appropriations, 1,094,656 blocks and 108,955 bricks, the cost being \$26,020.04. In addition, there were purchased for use in streets to be improved from appropriations for 1895-96, 165,026 blocks, costing \$3,762.59.

#### VITRIFIED SEWER BRICKS.

There were purchased 525,763 repressed vitrified fire-clay bricks for use in inverts of sewers. These bricks cost \$16.50 per 1,000—45 cents less than was paid under the preceding contract. \$8,675.09 were expended in this line.

#### RED PAVING BRICKS.

There were purchased 1,269,153 red paving bricks, at a cost of \$12,024.43; 10,333 were supplied by a local dealer, and the balance came from Frederick, Md. The price for the former, delivered on line of work, was \$7.50 per 1,000, while the latter cost \$9.50 at the property yard. The cost of hauling was 90 cents per 1,000 for city deliveries, making the Frederick bricks cost \$2.90 more than the local product. It is thought that their manifest superiority justified this additional expense.

Of second-quality bricks, 3,450 were purchased. The price for these was \$7.50 per 1,000.

#### RED SEWER BRICKS.

Seven hundred and forty-one thousand three hundred and eighty-three red sewer bricks, costing \$4,721.44, were purchased during the year. Pending award of the annual contract, bricks were delivered on line of work at \$7.20 for city deliveries, higher prices being charged for outlying work. Under the contract the District received the bricks at the contractors' yards, and hauled them with its own teams. The price at the yard was \$6 per 1,000. This method has been thoroughly satisfactory, and will likely be continued during the current year.

#### ASPHALT BLOCKS AND TILES.

One hundred and ninety-three thousand six hundred and eighty-seven asphalt blocks and 8,006 tiles were purchased at a cost of \$12,633.88, the prices being \$63 and \$52.50 per 1,000, respectively. These were of local manufacture. There is no competition in this class of material. The prices, however, are lower than before the establishment of the local plant.

#### VITRIFIED INVERT BLOCKS.

A contract for furnishing 17,600 feet of vitrified invert blocks was awarded last November. This contract is still in course of prosecution. There were delivered, to July 1, 8,388 feet, at a cost of \$3,355.20. It will be necessary to defray part of the cost of this contract from the 1895-96 appropriations, and the proposals for the current year have been made accordingly. The price under existing contracts is 40 cents per foot, 20 cents less than paid for the year 1893-94, and the lowest at which the articles have yet been purchased.

The present contractor has patented these blocks, and a suit against the District for infringement because of purchases from other parties is now pending.



## TERRA COTTA SEWER PIPE.

Eighty-three thousand seven hundred and fifty-three feet of sewer pipe and branches, costing \$18,397.55 (including two ventilating traps), were purchased during the year. The prices paid were: 6-inch pipe, 4½ cents; 8-inch, 6½ cents; 10-inch, 10 cents; 12-inch, 11½ cents; 15-inch, 18½ cents; 18-inch, 26½ cents; 21-inch, 40 cents; 24-inch, 49 cents. Branches cost 30 cents, 41 cents, 46 cents, 75 cents, \$1.13, \$1.63, and \$2.08, respectively. Bends were 16 cents each. These prices are the lowest that have been reached for years, if, indeed, they have ever touched these figures. Deliveries have not yet been completed.

## NATURAL HYDRAULIC CEMENT.

The annual contract for furnishing natural hydraulic cement was awarded to a new company, the proposals opened September 22, being their first tender to the District. While their ability to fulfill a contract from their own mill seemed questionable, the specifications and contracts amply secured the District from loss through failure to deliver cement as required. Because of the tardiness of the contractors, it was necessary to go repeatedly into the market and purchase cement. Four thousand four hundred and twenty-five barrels were bought under these conditions, and the increased cost, amounting to \$44, was charged against the contractors. With the exception of about 600 barrels, all cement furnished by the contractors was of a brand other than their own. It has, however, all passed the tests provided in the specifications, and the deliveries of the past spring seem to have given much satisfaction.

While the prosecution of this contract has caused this office much care and annoyance, the District has lost absolutely nothing, because of what may be termed the slowness of the contractors. In view of the fact that competition in this line has been somewhat restricted, and the low prices at which it has been lately possible to buy cement, the advisability of the course pursued seems patent. The prices paid under this contract were \$1 for barreled cement and 79 cents for cement in sacks. The prices for the previous year were \$1.05 and 90 cents, respectively.

This contract is still incomplete. To July 1, there were purchased, both under the contract and in open market, 27,740½ barrels, at a cost of \$24,218.16.

During the past two years the District has been purchasing much of its cement in sacks, thereby reducing the cost by about 25 per cent. If this were applied to the entire cement business, the saving would be somewhere in the neighborhood of \$7,500 per annum. It is recommended that during the current year only barreled cement sufficient for outlying jobs be purchased. Many of the sewer contracts are drawn requiring the District to furnish cement in barrels. A change in this respect is suggested.

Another departure in the District's cement business was the delivery and issue of cement at the contractor's place of business instead of the District's storehouse on Canal street. This practice saves the hauling charge of about 5 cents per barrel. As the District uses from 30,000 to 40,000 barrels annually, this course means a net saving of something over \$1,200, after allowing for the additional storekeeper which this system involves. The contractor insures the safety of the cement; and, as the District is represented by its storekeeper, there is no real objection to urge against this practice. Two years' experience confirms this statement.

## PORTLAND CEMENT.

Of Portland cement 2,899 barrels were purchased from the 1894-95 appropriation, at a cost of \$6,130.40. The price paid was \$2.12 per barrel; \$2.29 was the ruling price during 1893-94.

All Portland cement furnished during the year was of domestic manufacture. This, with the exception of 300 barrels purchased as an experiment during the two preceding years, is the first American Portland cement used in District sewers. As far as can be ascertained it has given thorough satisfaction. The reports of the inspector of asphalts and cements show it to be ground very fine and to possess great tensile strength.

## SAND.

Sand to the amount of 713½ cubic yards was purchased from the 1894-95 appropriation. This small quantity is explained by the fact that the lowest bid for furnishing concrete sand was 21 per cent higher than that of the preceding year, and this at a time when the ruling prices of all materials were low. It so happened that the supply on hand was quite large, the result of accumulated balances from prior years. All bids were therefore rejected, and the year's requirements were met from this stock. Proposals have recently been received and contract awarded for the class at 44 cents per cubic yard, 13 cents lower than the lowest price last summer. About 7,300 cubic yards of this sand were used during the year.

Screened sand was purchased as needed, the prices ranging from 45 to 70 cents per cubic yard. The total amount expended was \$112.54.

#### PEBBLES.

In continuance of the practice inaugurated during the summer of 1893, 4,512½ cubic yards of screened pebbles were purchased for use in concrete around sewers. The total cost was \$3,330.38. Seventy-five cents per cubic yard was the ruling price, 10 cents less than that paid the year previous. Broken stone, formerly used for this purpose, cost \$1.50 per yard.

#### BLUESTONE TRAP FRAMES AND COVERS.

No contract for these articles was awarded until the cold weather made it necessary to discontinue the building of concrete covers. Fifty-nine bluestone covers, etc., were purchased between the commencement of the winter season and the close of the fiscal year. The prices range from \$16.50 to \$17.75 and \$18 to \$19 for side and corner traps, respectively. There were expended in this line \$999.75.

#### CASTINGS.

The castings purchased during the year consisted of 616 manhole frames, 696 manhole covers, 178 alley grates and frames, 12 extra grates, and 600 water stopcock boxes; 2,128 wrought-iron manhole steps are also included in this account. In addition, 502 steps, costing \$58.92, were made at the blacksmith shop. The stopcock boxes were what is known as Buffalo pattern. The total expenditures for castings were \$5,053.13.

#### LUMBER.

Of lumber 207,506 feet were purchased as needed, at a cost of \$3,907.23.

#### PITCH.

Experiments made by the inspector of asphalts and cements having demonstrated the superiority of the Scotch pitch, 4,950 gallons were purchased, at a cost of \$383.62, 7½ cents per gallon being the price paid.

#### BROKEN STONE.

Of broken stone 66½ cubic yards were purchased, at a cost of \$97.83. This includes granolithic used in concrete basin tops.

#### BLUESTONE FLAGGING.

Of bluestone flagging 61 feet were purchased for use in manholes repaired to accommodate electric railroad built by Metropolitan Railroad Company. Twenty-seven cents per foot (\$16.47 in all) were paid.

#### STRUCTURAL STEEL.

There were expended for structural steel for bridges \$211.50.

#### REPAIRS TO TOOLS.

There were expended \$185.28 in repairing tools, including the steeling of 472 picks, at 35 cents each. The work was not thoroughly satisfactory. The District has recently established its own blacksmith shop with good results, the work being of better character and less expensive than under the old system. The question of providing sufficient work to keep this shop running is now engaging attention.

#### EMPLOYEES.

There were paid to employees of the division other than those on the annual roll \$7,473.92. The appropriation act provides for two inspectors of property and one messenger.

In addition to the above, \$6.62 were expended for hauling and \$300 for rent of one property yard.

Statements showing expenditures in detail, also list of per diem employees, herewith.

Respectfully submitted.

L. T. BOISEAU,  
Superintendent of Property.

The ENGINEER COMMISSIONER,  
District of Columbia.  
(Through Capt. Lansing H. Beach, assistant.)



*Construction materials purchased on account of appropriations, 1894-95.*

Appropriation.	Granite curbing.		Granite blocks.		Vitrified paving bricks.		Vitrified paving blocks.	
	Feet.	Cost.	Number.	Cost.	Number.	Cost.	Number.	Cost.
Work on streets and avenues.....	10,892.69	\$3,801.30	85,750	\$848.30	18,546	\$333.83	182,106	\$4,182.02
Permit work.....	23,856.11	17,845.97			61,047	1,098.84	674,918	15,388.13
Current repairs streets, etc.....	62.70	78.37	2,525	65.65	20,142	862.54	63,181	1,489.89
Constructing county roads.....	233.46	187.99					32,894	749.98
Repairs concrete pavements.....	220.56	271.36			4,115	74.07	123,817	2,883.03
Repairs sidewalks and curbs.....	537.04	388.54						
Pumping expenses and pipe distribution.....							300	6.84
Engine houses.....	168.05	129.64					5,373	122.50
Plumbers' assessment fund.....					1,060	19.44		
Deposits.....	87.96	119.62			4,065	73.17	12,117	276.26
Total.....	34,558.57	27,322.79	38,275	913.95	108,995	1,961.89	1,094,656	24,988.15
Estimated expenditures.....	34,558.57	27,322.79	38,275	913.95	108,995	1,961.89	1,094,656	24,988.15

Appropriation.	Vitrified sewer bricks.		Red paving bricks.		Red sewer bricks.		Asphalt tiles and blocks.	
	Number.	Cost.	Number.	Cost.	Number.	Cost.	Number.	Cost.
Work on streets and avenues.....			800	\$7.60	24,466	\$146.80		
Permit work.....			1,234,239	11,713.64	246,651	1,510.70	180,754	\$11,303.40
Current repairs streets, etc.....			18,350	158.33	7,786	46.40	8,774	552.76
Repairs county roads.....			1,400	8.40				
Constructing county roads.....			6,000	57.00	9,933	59.60		
Repairs concrete pavements.....					24,050	154.62		
Main and pipe sewers.....	135,000	\$2,227.50			124,822	847.63		
Suburban sewers.....	21,200	349.80			41,915	290.76		
Relief sewers and replacing obstructed sewers.....					114,050	721.80		
Cleaning and repairing sewers and basins.....	7,742	127.74	1,800	12.35	101,247	639.14		
Main intercepting sewer.....	316,821	5,227.55						
Rock Creek intercepting sewer.....	45,000	742.50						
Automatic siphons.....					22,497	134.98		
Pumping expenses and pipe distribution.....							845	53.22
Extension high service.....					2,050	20.91		
Engine houses.....							7,500	472.50
Plumbers' assessment fund.....							4,000	252.00
Deposits.....			7,064	67.11	22,416	152.18		
Total.....	525,763	8,675.09	1,269,153	12,024.43	741,863	4,725.52	193,867	2,633.88
Estimated expenditures.....	525,763	8,675.09	1,269,153	12,024.43	741,863	4,725.52	193,867	2,633.88

*Construction materials purchased on account of appropriations, 1894-95—Continued.*

Appropriation.	Invert blocks.		Sewer-pipe, branches and bends.		Natural cement.		Portland cement.	
	Feet.	Cost.	Feet.	Cost.	Barrels.	Cost.	Barrels.	Cost.
Work on streets and avenues.....			147	\$13.92	65½	\$51.94	7½	\$15.72
Permit work.....			131,181	4,859.97	5,598	4,623.79	200	424.00
Current repairs streets, etc.....			150	30.57	640½	509.25	46½	98.58
Repairs county roads.....			1,671	282.67	7	5.53	4	8.48
Constructing county roads.....			451	138.26	91½	75.44	8	16.96
Repairs concrete pavements.....			1,849	75.60	73	58.09	10½	21.73
Repairs sidewalks and curbs.....					22	17.38	53	112.36
Construction and repair bridges.....					162	159.69		
Main and pipe sewers.....	14,881½	\$1,952.60	12,697	3,862.20	4,050½	3,383.07	906½	1,917.43
Suburban sewers.....	1,475	590.00	5,130	1,552.21	1,437½	1,199.29	146	309.52
Relief sewers and replacing obstructed sewers.....	(1)		26,901	7,130.13	4,955½	4,131.18	50	106.00
Cleaning and repairing sewers and basins.....	78	31.20	1,563	223.78	1,100	995.00	100	212.00
Main intercepting sewer.....	125	50.00	81	30.82	7,767	7,578.61	1,105	2,332.00
Rock Creek intercepting sewer.....	1,828½	731.40	261	30.66	(1)		220	466.40
Automatic siphons.....			28	1.92	99	79.89	10½	22.26
Pumping expenses and pipe distribution.....			300	13.50	970½	794.10	5	10.60
Extension high service.....			198	34.11	427	338.39	22½	47.70
Purchase and repair pumps.....					1	.79		
Engine houses.....					10	7.90		
Plumbers' assessment fund.....					95½	75.44		
Depots.....			1,200	117.23	166½	132.59	3½	7.60
Engineer stables.....					1	.79	½	1.06
Total.....	18,888	3,855.20	183,753	18,397.55	27,740½	24,218.10	2,899	6,130.40
Material to be purchased (estimated).....	1,820	738.00	19,195	4,451.02	15,352	14,554.56		
Estimated expenditures.....	10,208	4,093.20	102,948	22,348.57	43,092½	38,772.66	2,899	6,130.40

<sup>1</sup> Incomplete.<sup>2</sup> Including 2 vent traps.

*Construction materials purchased on account of appropriations, 1894-95—Continued.*

Appropriation.	Sand.		Pebbles.		Broken stone.		Bluestone trap tops, etc.	
	Cu. yds.	Cost.	Cu. yds.	Cost.	Cu. yds.	Cost.	Number.	Cost.
Work on streets and avenues .....	35½	\$20.68	10	\$7.50	1	\$1.75	6	\$103.50
Permit work .....	111	72.46	1,817½	1,363.25	50,3½	70.92	4	69.00
Current repairs streets, etc. ....	4½	2.99	107½	30.75				
Repairs county roads .....	10	6.90	50	37.50				
Constructing county roads .....	4½	3.26	3½	2.50				
Repairs concrete pavements .....	27½	16.18	11½	8.38	7,1880	11.84	6	104.25
Repairs sidewalks and curbs .....	51	23.97	3½	2.50				
Main and pipe sewers .....	119½	72.02	841½	576.99	5½	10.54	17	297.50
Suburban sewers .....	46½	27.71	300	225.00	1½	2.20	12	207.00
Relief sewers and replacing obstructed sewers .....	31½	20.18	1,079½	809.62				
Cleaning and repairing sewers and basins .....	49½	33.92	160	119.99	½		10	184.00
Automatic siphons .....	17½	11.87	14½	10.75				
Pumping expenses and pipe distribution .....	44½	21.07	11½	8.75				
Extension high service .....	27½	13.38	14½	11.13				
Purchase and repair pumps .....	½	24						
Engine houses .....	½		3½	2.50				
Plumbers' assessment fund .....	91½	43.09	20½	15.12				
Deposits .....	140½	21.39	64½	48.15			2	34.50
Engineer stables .....	1	69						
Total .....	713½	412.54	4,512½	3,330.38	66½	97.83	59	999.75
Estimated expenditures .....	713½	412.54	4,512½	3,330.38	66½	97.83	59	999.75

Appropriation.	Castings.						Lumber.		Pitch.	
	Manhole frames.	Covers.	Alley grates.	Water boxes.	Manhole steps.	Cost.	Ft., E. M.	Cost.	Gallons.	Cost.
Work on streets and avenues .....	2	11			15	\$27.41			300	\$23.25
Permit work .....	191	191	19	500	905	1,580.54	70,303	\$887.79	1,100	85.25
Current repairs streets, etc. ....		4	6	100		128.20	3,980	97.70	1,875	145.32
Repairs county roads .....							3,984	47.81	50	3.88
Constructing county roads .....							2,032	24.39		
Repairs concrete pavements .....	1	14	4		5	48.02	5,892	141.67		
Construction and repair bridges .....							102,700	2,313.52		
Main and pipe sewers .....	216	248	59		452	1,615.55	17,745	217.71		
Suburban sewers .....	30	49			150	198.19	1,376	16.52		
Relief sewers and replacing obstructed sewers .....	100	100			4345	534.27	3,708	44.75		
Cleaning and repairing sewers and basins .....	49	49	84		85	652.89	4,604	76.22		
Main intercepting sewer .....	4	4			40	26.81				
Rock Creek intercepting sewer .....	4	4	3		30	46.69				
Automatic siphons .....	3	3			24	18.09	448	13.85		
Gauging sewers and rainfall .....							694	24.70		
Pumping expenses and pipe distribution .....									708	54.85
Extension high service .....	1	1			6	5.79			162	12.56
Plumbers' assessment fund .....									755	58.51
Deposits .....	15	18	3		71	111.76	42	50		
Total .....	616	696	178	600	2,128	4,994.21	207,506	3,907.23	4,950	383.62
Estimated expenditures .....	616	696	178	600	2,128	4,994.21	207,506	3,907.23	4,950	383.62

¹Incomplete.

²Including 7 cedar posts.

³Including 10,500 oak stakes.

⁴Additional steps made at District of Columbia shop.



*Construction materials purchased on account of appropriations, 1894-95—Continued.*

Appropriation.	Flagging.		Hauling.	Repairing tools.	Services.	Structural steel.	Rent of property yards.	Total.
	Feet.	Cost.						
Work on streets and avenues			\$0.72	\$1.60	\$974.88			\$15,032.72
Permit work			1.00	101.34	2,530.65			75,471.64
Current repairs streets, etc.					154.00			4,019.80
Repairs county roads					14.25			415.42
Constructing county roads					78.00			1,308.88
Repairs concrete pavements					97.80			3,906.64
Repairs sidewalks and curbs					39.00			583.75
Construction and repair bridges					14.70	\$211.50		2,690.41
Main and pipe sewers				70.00	872.08			17,922.82
Suburban sewers					250.16			5,218.86
Relief sewers and replacing obstructed sewers					849.24			14,347.17
Cleaning and repairing sewers and basins				2.34	86.84			3,306.09
Main intercepting sewer			4.90		723.10			15,973.79
Rock Creek intercepting sewer					651.19			2,668.84
Automatic syphons					20.85			314.46
Gauging sewers and rainfall								24.70
Pumping expenses and pipe distribution								962.93
Extension high service								483.97
Purchase and repair pumps								1.03
Engine houses								735.04
Plumbers' assessment fund					87.00			550.60
Deposits	61	\$16.47			30.18			1,209.25
Engineer stables								2.54
Rent property yards							\$300.00	300.00
Total	61	16.47	6.62	185.28	7,473.92	211.50	300.00	167,492.03
Material to be purchased (estimated)								19,743.58
Estimated expenditures	61	16.47	6.62	185.28	7,473.92	211.50	300.00	187,235.61

## DIVISION OF HIGHWAY EXTENSIONS.

OFFICE OF THE ENGINEER COMMISSIONER,  
Washington, September 30, 1895.

SIR: I have the honor to submit the following report of work in this department for the fiscal year ended June 30, 1895:

The preparation of the "highway extension plans," under the act of March, 1893, and "plats of subdivisions," under the act of 1888, have been made jointly by the force of this office.

## PERMANENT SYSTEM OF HIGHWAYS.

That part of the District north of the city and between North Capitol street extended and Rock Creek has been designated as section No. 1 of the highway plans. The surveys, calculations, etc., were completed on this section by the end of the year, and a bound volume of 40 sheets, showing all necessary lines, data, and explanations was submitted to and approved by the Commissioners of the District of Columbia.

Section No. 2 was made to include that part of the District north of the city and between North Capitol street extended and the Eastern Branch. A tentative map, on a scale of 1 inch to 400 feet, has been drawn of the whole section, showing lines of contemplated highways and present contours.

Detail maps, on a scale of 1 inch to 100 feet, were made of all recorded subdivisions of this section. These maps are on 20 sheets, 24 by 30 inches, and 200 lithographs were made of each of 19 of them. A set of these lithographs has been joined, so as to form 3 large maps of the section, and contours have been platted (enlarged) upon them from the Coast Survey sheets. These large sheets are to serve for detail study in the location of permanent highways. A set has also been prepared in volume form, which will receive all calculations and details in regard to new locations, and will include 43 sheets.

Section No. 3, which includes all the District west of Rock Creek and outside of Georgetown, has in part been treated by Messrs. Olmsted, Olmsted, and Elliot, and very little study has been given it by this office. A tentative map was made of this area early in the year, in which a plan was shown for street lines along Massachusetts avenue extended and the Tenleytown road. This plan simply followed a system previously made for this section under the act of 1888 and which is conformed to by several recorded subdivisions. It has lately been proposed to extend this plan to Connecticut avenue, and to there connect with a system of curved highways running to the Rock Creek Park. Between Massachusetts avenue extended and the Conduit road is another section similar to that near the park, and requiring a like departure from right line extensions.

Section No. 4 has been made to embrace that part of the District east and south of the Eastern Branch. It is the most difficult part of the District to deal with in formulating some highway plan, and will not admit of direct extensions without an enormous expense. The irregular subdivisions of Anacostia, Garfield, and Barry Farm are also a great impediment to any well-devised plan.

The high ridge running parallel with the District line affords a fine location for an avenue several miles in length which will in part give a view of the whole city.

Some little study has been given to the location of such an avenue, lines of slight curvature being suggested in certain parts in order to retain the best grade and outlook.

Special surveys have been made for opening Albemarle street; locating streets in West Brookland; for new boundary of Zoo Park at Connecticut avenue; for street lines west of Tenleytown; for Massachusetts avenue extended, and for property lines at Fourteenth street and Spring road.

A number of azimuth lines have been located and marked by monuments and subdivisions connected by transit lines with various points of reference. Maps have been made of all these surveys and sketches, and plans submitted to this office from time to time have been passed upon.

Very respectfully,

Maj. CHARLES F. POWELL,  
*Engineer Commissioner, District of Columbia.*

WM. P. RICHARDS,  
*Assistant Engineer.*

#### REPORT OF CHIEF CLERK, ENGINEER'S DEPARTMENT.

OFFICE OF THE ENGINEER COMMISSIONER,  
*Washington, July 16, 1896.*

MAJOR: I have the honor to submit the following report for the fiscal year ended June 30, 1895:

Communications received, briefed, and recorded in L. R. book .....	10, 385
Indorsements, references, and reports on above .....	56, 925
Letters and orders prepared .....	8, 524
Copies of contracts drawn .....	700
Vouchers and bills prepared, recorded, and forwarded .....	4, 351

Schedules of bids received during the fiscal year for work and materials under the Engineer office, and statements of contracts for street improvement, sewers, construction material, supplies, and miscellaneous work are herewith.

Very respectfully,

A. Y. LAKENAN,  
*Chief Clerk, Engineer's Office.*

Maj. CHARLES F. POWELL,  
*Corps of Engineers, U. S. A.,  
Engineer Commissioner of the District of Columbia.*

## Statement of contracts for the improvement of streets and roads for fiscal year 1895.

Contract.	Date.	Contractor.	Location.	Character of work.
1894				
1894	Sept. 8	Andrew Gleeson, Washington, D. C.	Twelfth street N.E. extended.	Grade and regulate.
1894	Sept. 12	George Killeen, Washington, D. C.	Prospect street, from Thirty-sixth to Thirty-eighth.	Do.
1897	Sept. 8	A. N. Brady, Washington, D. C.	Pennsylvania avenue and Branch avenue.	Do.
1890	Sept. 14	R. G. Israel, Washington, D. C.	Massachusetts avenue extended.	Grade.
1891	Sept. 17	Washington Asphalt Block and Tile Co., Washington, D. C.	Canal street S.W., from B to C.	Lay asphalt.
1894	Sept. 18	Thomas H. Thomas, New York City.	Valley street, from N to P.	Block pavement.
			K street N.W., from First to Third.	Laying asphalt pavement on cobble rubble or macadam base.
			East Capitol street, from Eleventh to Thirteenth.	
			V street N.W., from Thirteenth to Fifteenth.	
			Fifteenth street N.W., from N to V.	
			Tenth street N.W., from T to U.	
			First street N.W., from K to Pierce.	
			T street N.W., from Fourteenth to New Hampshire avenue.	
			Fourth street N.E., from E to H.	
			Eight street S.W., from E to H.	
			Massachusetts avenue, from Second to Fourth N.E.	Lay asphalt pavement on 4-inch and 6-inch hydraulic base.
1898	Sept. 19	The Cranford Paving Co., Washington, D. C.	Eight street S.E., from East Capitol to North Carolina avenue.	
			Fourteenth street extended, from Kenyon street to Whitney avenue.	
			Eighteenth street extended, from Florida avenue to Columbia road.	
2019	Oct. 19	Washington Asphalt Block and Tile Co., Washington, D. C.	New York avenue, from Ninth street to Tenth (parking).	Lay gravel roadway.
2023	Oct. 22	Husey & Brown, Washington, D. C.	D street S.E., from Ninth street to Kentucky avenue.	
2025	Oct. 22	Cudmore & Frawley, Washington, D. C.	I street N.W., from M to N.	Lay granite block pavement.
2034	Nov. 10	J. A. Blundon, Washington, D. C.	Twelfth street S.E., from Lincoln Park to Pennsylvania avenue.	Lay gravel roadway.
			Montgomery street, from Bladensburg road to Brightwood avenue.	Repair.
2035	Nov. 12	Washington Asphalt Block and Tile Co., Washington, D. C.	Fifteenth street N.E., from East Capitol to E.	Lay gravel roadway.
2037	Nov. 16	Lyons Bros., Washington, D. C.	M street N.E., from Twelfth street to Trinidad avenue.	Lay macadam roadway.
2038	Nov. 19	C. H. Kalin, Washington, D. C.	C street N.E., from Twelfth street to Tennessee avenue.	Lay gravel roadway.
2046	Dec. 28	M. F. Tully, Washington, D. C.	Eighteenth street N.W., from Florida avenue to Columbia road.	Grade sidewalks.
2051	Jan. 16	Skinner & Burrows, Washington, D. C.	Entrance to Zoo Park, from Woodley Lane road.	Grade.
2053	Jan. 17	Horn & Glarkin, Washington, D. C.	First street extended, from V to Michigan avenue.	Grade sidewalk space.
2070	Apr. 16	Alfred Gleason, Washington, D. C.	Kennas avenue, from Fifteenth street to the Zoo Park.	Grade and gravel.
2077	Apr. 17	M. F. Tully, Washington, D. C.	Sixteenth street, from Prospect to Superior streets in Meridian Hill.	Macadamize, grade, and regulate.
2072	Apr. 18	Cudmore & Frawley, Washington, D. C.	Spring street, Anacostia.	Grade and lay cobble gutters and cross-ings.
2073	Apr. 24	Langhorne, Allen & Co., Washington, D. C.	Massachusetts avenue extended.	Grade.

2074	Apr. 29	M. H. Cavanaugh, Washington, D. C.	Albemarle street, from Grant road to Connecticut avenue.	Construct culvert.
2075	do	Lyons Bros., Washington, D. C.	Road from Broad Branch to Chevy Chase Circle.	Grade and lay macadam roadway.
2076	May 3	Washington Asphalt Block and Tile Co., Washington, D. C.	Such streets as ordered.	Lay asphalt block pavement.
2077	May 4	The Cranford Paving Co., Washington, D. C.	do	Lay standard asphalt pavement.
2078	May 10	Andrew Gleeson, Washington, D. C.	Eleventh street NE., from Maryland avenue to Florida avenue.	Grade, relay cobble gutters and cross-ings, and relay macadam pavement.
2079	May 13	Knight & Mullen, Washington, D. C.	Albemarle street, from Grant road to Connecticut avenue.	Grade.
2080	May 21	Cudmore & Frawley, Washington, D. C.	Florida avenue, from New York avenue to Brentwood road. Delaware avenue, from G to K streets SW.	Grade, lay cobble gutters and cross-ings, macadam roadway.

## Statement of contracts for constructing sewers during fiscal year 1895.

Con- tract.	Date.	Contractor.	Location.	To construct—
1921 1922	1894. Aug. 6 do ..	E. G. Gummel, Washington, D. C. Jas. McCandlish, Washington, D. C.	G street SW., from Third to Four-and-a-half L street NE., from North Capitol to First.....	630 linear feet 24-inch pipe sewer. 300 linear feet 4 feet diameter con- crete sewer.
1923	Aug. 7	Ralph Wormley, Washington, D. C.	M street SE., from Eighth to Ninth. Fourteenth street SE., from A to B.....	400 linear feet 24-inch pipe sewer. 300 linear feet 2.75 by 4.125 feet con- crete sewer.
1924	do ..	R. H. Lamb, Washington, D. C.	Thirteenth street NW., from Columbia road to Kenesaw ave- nue. Thirteenth street NW., from Kenesaw avenue to Kenyon street. Sherman avenue from Marshall to Farragut street .....	380 linear feet 2.25 by 3.375 feet con- crete sewer. 370 linear feet 2 by 3 feet concrete sewer. 355 linear feet 2.5 by 3.75 feet concrete sewer.
2003	Sept. 25	B. J. Coyle, Washington, D. C.	Fifteenth street NE., from C street to Tennessee avenue.....	1,090 linear feet 3.25 by 4.875 feet; 440 linear feet 3 by 4.5 feet concrete sewer.
2007	Sept. 24	Buckley & Larguey, Washington, D. C.	B street SE., from Nineteenth street to Anacostia River..... Sherman avenue, from Sheridan to Farragut street.....	420 linear feet 2.75 by 4.125 feet; 570 linear feet 2.5 by 3.75 feet; 350 linear feet 2.25 by 3.375 feet concrete sewer. 780 linear feet 2.25 by 3.375 feet con- crete sewer.
2008	Sept. 29	E. G. Gummel, Washington, D. C.	L street NE., from First to Delaware avenue .....	350 linear feet 21-inch pipe sewer.
			Sheridan street, from Sherman to Brightwood avenue .....	840 linear feet 24-inch pipe sewer.
			Whitney avenue, from Sherman to Brightwood avenue .....	800 linear feet 18-inch pipe sewer.
			Patterson street, from First to Second NE .....	170 linear feet 24-inch pipe sewer.
			Alley square 711 .....	565 linear feet 21-inch pipe sewer.
			M street NE., from First to Second .....	600 linear feet 15-inch pipe sewer.
			Sixth street NW., from R to S .....	560 linear feet 24-inch; 960 linear feet, 21-inch pipe sewer.
2009	Oct. 1	Cotton & Bolden, Washington, D. C.	Third street NE., from A to C.....	60 linear feet 18-inch pipe sewer.
2050	1895. Jan. 15		Second street NW., from F to Massachusetts avenue.....	630 linear feet 24-inch pipe sewer.
2055	Feb. 25	Jas. McCandlish, Washington, D. C. Thos. Buckley, Washington, D. C.	Rock Creek Valley, from Woodley road to Piney Branch .....	Intercepting sewer.
			Maryland avenue SW., from Third to Four-and-a-half street .....	760 linear feet 24-inch pipe sewer.
2056	Feb. 27	J. P. Larguey, Washington, D. C.	Eleventh street NW., from New York avenue to M street Massachusetts avenue, from Ninth to Eleventh street NE .....	1,030 linear feet 24-inch; 140 linear feet 21-inch; 650 linear feet 15-inch; 50 linear feet 12-inch pipe sewer.
2057	Feb. 21	Bolden & Wormley, Washington, D. C.	Holmes avenue, from Spring road to Whitney avenue.....	360 linear feet 21-inch; 300 linear feet 18-inch; 170 linear feet 12-inch pipe sewer.
				510 linear feet 24-inch; 950 linear feet 21-inch; 180 linear feet 18-inch; 350 linear feet 12-inch pipe sewer.



2058	Mar. 1	Naylor & Reunizer, Washington, D. C.	M street SW., from Water to Sixth street	35 linear feet 24-inch, 250 linear feet 21-inch, 190 linear feet 18-inch pipe sewer.
2059	Mar. 2	Jno. Jacoby, Wilmington, Del.	Sixth street SE., from Georgia avenue to Anacostia River	820 linear feet 6.25 diameter, brick and concrete sewer.
2060	Mar. 12	Geo. S. Good & Co., Lock Haven, Pa.	Twelfth street SE., from N street to Anacostia River	660 linear feet 5.75 diameter, brick and concrete sewer.
2062	June 11	Thos. Buckley, Washington, D. C.	Fourteenth street NW., from Florida avenue to Roanoke street. North Capitol street, from O to P Sixth street SW., from G to H I street SW., from Third to Four-and-a-half	1,820 linear feet 24-inch pipe sewer. 585 linear feet 21-inch pipe sewer. 225 linear feet 18-inch pipe sewer. 310 linear feet 24-inch, 310 linear feet 21-inch pipe sewer.
2064	June 12	Bolden & Wormley, Washington, D. C.	I street SW., from Crossing to Four-and-a-half H street SW., from Four-and-a-half to Sixth	50 linear feet 18-inch pipe sewer. 170 linear feet 15-inch, 295 linear feet 12-inch, 90 linear feet 10-inch pipe sewer.
2065	June 15	Lyons Bros	Liuden street, from Wilson to Pomeroy Twelfth street NW., from Massachusetts avenue to M street. Virginia avenue NW., from Twenty-first to Twenty-second street.	350 linear feet 2.25 by 3.375 feet concrete sewer. 570 linear feet 24-inch pipe sewer. 400 linear feet 21-inch, 350 linear feet 18-inch pipe sewer.

*Contracts for general supplies for fiscal year 1895.*

Contract.	Date.	Contractor.	To furnish—
	1894.		
1928	Aug. 16	John H. Buscher, Washington, D. C.	Fresh meat.
1929	Aug. 17	John Kennedy, Washington, D. C.	Fuel.
1931	Aug. 20	J. C. Ergood, Washington, D. C.	Groceries.
1932	Aug. 21	H. I. Gregory, Washington, D. C.	Tinware.
1934	Aug. 16	J. P. Agnew & Co., Washington, D. C.	Fuel.
1935	Aug. 24	Easton & Rupp, Washington, D. C.	Stationery.
1936	Aug. 25	J. F. Oyster, Washington, D. C.	Groceries.
1937	Aug. 22	J. E. Stake & Co., Washington, D. C.	Do.
1938	Aug. 23	W. H. Moore & Co., Washington, D. C.	Blank forms and printing.
1939	Oct. 19	W. H. Butler, Washington, D. C.	Glass, paints, and varnish.
1941	Aug. 28	S. R. Waters, Washington, D. C.	Groceries.
1942	Aug. 27	Dunlap Printing Co., Philadelphia, Pa.	Stationery.
1943	do	do	Blank forms and printing.
1944	do	Frank Hume, Washington, D. C.	Groceries.
1945	Aug. 28	Wilmarth & Edmonston, Washington, D. C.	Furniture.
1946	do	Thos. W. Smith, Washington, D. C.	Lumber.
1948	Aug. 29	Thos. T. Keane, Washington, D. C.	Meats.
1949	do	B. Rich & Sons, Washington, D. C.	Boots and shoes.
1950	do	do	Dry goods.
1951	do	R. Carter Ballantyne, Washington, D. C.	Stationery.
1952	do	do	Schoolbooks.
1953	Aug. 30	C. J. Stott & Co., Washington, D. C.	Stationery.
1954	do	W. H. Baum, Washington, D. C.	Fuel.
1955	do	H. Powdermaker, Washington, D. C.	Fresh meat.
1956	do	F. P. May & Co., Washington, D. C.	Stationery.
1957	do	do	Hardware.
1958	Aug. 30	do	Tinware.
1959	Aug. 31	W. J. C. Dulany, Baltimore, Md.	Stationery.
1960	do	do	Schoolbooks.
1961	do	do	Hardware.
1962	do	J. B. Daish, Washington, D. C.	Dry goods.
1963	do	do	Forage.
1964	do	Z. D. Gilman, Washington, D. C.	Drugs.
1966	Sept. 4	W. A. Pate, Washington, D. C.	Hardware.
1967	do	do	Telegraph and telephone supplies.
1968	do	do	Saddlery.
1969	Sept. 10	G. F. Muth & Co., Washington, D. C.	Stationery.
1970	do	do	Hardware.
1971	Sept. 4	Lansburgh & Bro., Washington, D. C.	Dry goods.
1972	do	Church & Stephenson, Washington, D. C.	Lumber.
1973	Sept. 5	W. D. Clark & Co., Washington, D. C.	Dry goods.
1974	do	Saks & Co., Washington, D. C.	Boots and shoes.
1975	Sept. 6	do	Dry goods.
1976	do	Wm. M. Galt & Co., Washington, D. C.	Groceries.
1978	do	Julius Lansburgh Furniture Co., Washington, D. C.	Furniture.
1983	Aug. 27	Royce & Marean, Washington, D. C.	Telegraph and telephone supplies.
1985	Sept. 9	Esterbrook Steel Pen Manufacturing Co., New York City.	Stationery.
1988	Sept. 5	B. Lowenstein & Bro., New York City.	Plumbers' material.
1995	Aug. 23	C. S. Braisted, New York City.	Stationery.
1996	Aug. 22	V. Baldwin Johnson, Washington, D. C.	Fuel.
1997	Sept. 10	Capitol Publishing Co., Washington, D. C.	Blank forms and printing.
1999	Sept. 19	Geo. White & Sons, Washington, D. C.	Miscellaneous castings.
2000	Aug. 29	B. B. Earnshaw, Washington, D. C.	Groceries.
2001	Sept. 15	Scheller & Stevens, Washington, D. C.	Drugs.
2010	Sept. 27	Wyckoff, Seamans & Benedict, New York City.	Stationery.
2017	Oct. 11	W. B. Moses & Sons, Washington, D. C.	Furniture.
2020	Oct. 19	Mitchell & Reed, Washington, D. C.	Plumbers' material.
2027	Oct. 18	C. T. Carter & Co., Washington, D. C.	Hardware.
2028	Oct. 25	Mackall Bros. & Flemer, Washington, D. C.	Drugs.
2033	Nov. 7	Chas. E. Hoover, Washington, D. C.	Fresh meats.
2036	Nov. 13	Jas. L. Barbour & Son, Washington, D. C.	Groceries.
2040	Nov. 23	Great Falls Ice Co., Washington, D. C.	Ice.
2043	Dec. 6	Hugh Reilly, Washington, D. C.	Glass, paints, and varnish.
2048	Dec. 15	W. T. Galliher & Bro., Washington, D. C.	Lumber.
	1895.		
2098	June 29	J. P. Agnew & Co., Washington, D. C.	Fuel.

*Statement of construction, hauling, and miscellaneous contracts for fiscal year 1895.*

Contract.	Date.	Contractor.	Description.
1577	1891. Sept. 14	Washington Gas Light Co., Washington, D. C.	Furnish gas and maintain street lights for 3 years from June 30, 1891; extended for 30 days from June 30, 1894.
1580	Sept. 23	Georgetown Gas Light Co., Georgetown, D. C.	Furnish gas and maintain street lights for 3 years from June 30, 1894; extended for 30 days from June 30, 1894.
1507	July 1	Nicolai Bros., Washington, D. C.....	Furnish oil and maintain street oil lamps for 3 years from July 1, 1891; extended for 30 days from June 30, 1894.
1564	Aug. 31	United States Electric Lighting Co., Washington, D. C.	Furnish and maintain electric lights from July 1, 1891, to June 30, 1894; extended 30 days from June 30, 1894.
1641	1892. June 9	Ellis & Daggett, Washington, D. C....	To sprinkle, sweep, and clean paved streets and avenues for 5 years from June 30, 1892.
1793	1893. June 7	The National Sanitary Co., Baltimore, Md.	Removal and destruction of garbage from date to July 1, 1897.
1920	1894. Sept. 20	Albert Daggett, Washington, D. C....	Sweep and clean paved alleys from July 1, 1894, to June 30, 1895.
1925	Aug. 11	Fred. Springmann, Washington, D. C.	Haul pipe, castings, valves, and other materials.
1927	Aug. 15	H. L. Cranford, Washington, D. C....	Lay cement pavements upon sidewalks.
1933	Aug. 21	Shiffler Bridge Co., Pittsburg, Pa.....	Furnish superstructure of a plate-girder highway bridge.
1947	Aug. 30	Nicolai Bros., Washington, D. C.....	Furnish, operate, and maintain not less than 500 gasoline lights.
1977	Sept. 6	W. W. Biggs, Washington, D. C.....	2 steam boilers, Summer School building.
1979	Sept. 5	J. R. Young, Washington, D. C.....	Take down main 2-story building of Georgetown market house and rebuild it 1 story.
1980	Sept. 7	Geo. W. Knox Express, Washington, D. C.	Haul granite curb.
1981	Sept. 1	P. H. & Richard Horn, Washington, D. C.	Haul sand, vitrified brick, and ordinary paving brick.
1982	do	D. Gaskins, Washington, D. C.....	Do.
1993	Sept. 17	J. M. Dunn, Washington, D. C.....	Construct 2-story 8 room school building corner School street and Grant avenue, Mount Pleasant.
2004	Sept. 26	C. H. Eslin, Washington, D. C.....	Construct reservoir at Reno.
2011	Oct. 4	H. I. Gregory, Washington, D. C.....	Smead heating and ventilating apparatus and dry-closet system in school building corner School street and Grant avenue, Mount Pleasant.
2013	Oct. 1	C. T. Holloway, Baltimore, Md.....	Chemical fire engine.
2016	Oct. 10	C. R. Monroe, Washington, D. C.....	Construct 2-story and basement 8-room school building on E street SE, between Thirteenth and Fourteenth streets.
2018	Oct. 18	C. Thomas & Son, Washington, D. C..	Construct engine house, square 1028.
2021	Oct. 22	P. H. & Richd. Horn, Washington, D. C.	Hauling vitrified paving brick.
2029	Oct. 30	P. McCartney, Washington, D. C.....	Construct a new ward at Washington Asylum.
2032	Nov. 8	Jas. M. Dunn, Washington, D. C.....	Construct engine house, Fourteenth street extended, Mount Pleasant.
2042	Nov. 23	Geo. White & Sons, Washington, D. C.	Construct fireproof stairways in Curtis, Seaton, and Abbott public schools.
2047	Dec. 31	H. I. Gregory, Washington, D. C.....	Furnish Smead system of heating and ventilating apparatus in school building, E street, between Thirteenth and Fourteenth, SE.
2052	1895. Jan. 21	Hussey & Brown.....	Lay vitrified brick or block pavements in alleys in squares 777, 83, 273, and 112, Georgetown; lay asphalt block pavement in alleys in squares 140, 4, 362, and 628.
2054	.....	Horn & Gaskins.....	Lay vitrified brick or block pavement in alleys in squares 37, 152, 235, 275, 509, 510.
2061	Mar. 12	La France Fire Engine Company, Elmira, N. Y.	Furnish 1 La France patent piston steam fire engine, third size.
2062	Mar. 13	The Washington Times Publishing Co., Washington, D. C.	Publish and deliver to residences notice of delinquent taxpayers in District of Columbia.
2064	Mar. 19	Wm. E. Stockett & Co., Washington, D. C.	Furnish 12 photolithographed sets of subdivisions of various squares in city of Washington.
2065	Mar. 22	Jas. Linsky & Son, Washington, D. C.	Painting Connecticut avenue bridge over Rock Creek.
2067	Mar. 16	The Washington News Publishing Co., Washington, D. C.	Publish and deliver to residences notice of delinquent taxpayers in District of Columbia.
2087	June 14	Albert Daggett, Washington, D. C....	Sweep, sprinkle, and clean paved alleyways from July 1, 1895, to June 30, 1896.

*Statement of construction, hauling, etc.—Continued.*

Contract.	Date.	Contractor.	Description.
2088	1895. June 17	Edwin Warfield, Baltimore, Md. ....	Collect and remove garbage and dead animals from July 1, 1895, to June 30, 1896.
2089	June 21	Newbold & Co., Washington, D. C. ....	Hauling pipes, castings, hydrants, valves, and other material.
2090	June 22	Wm. Ryan, Washington, D. C. ....	Clean First street west, from south side Garfield Circle to and around Peace Monument; Pennsylvania avenue, Executive avenue, New York avenue, Fourteenth to Fifteenth streets, Fifteenth street, from New York to Pennsylvania avenue, and other streets, from July 1, 1895, to June 30, 1896.
2091	June 19	Henry L. Cranford .....	Lay cement pavements upon sidewalks.
2093	....do....	The Pennsylvania Globe Gas Light Co., Philadelphia, Pa.	Furnish, operate, and maintain 1,000 naphtha lights, from July 1, 1895, to June 30, 1896.

*Contracts for furnishing construction material for fiscal year 1895.*

Contract.	Date.	Contractor.	To furnish—
1926	1894. Aug. 14	Mohawk and Hudson Manufacturing Co., Troy, N. Y.	Parallel seat gate valves for water department.
1930	Aug. 20	M. J. Drummond, New York City. ....	10,000 feet 4-inch, 50,000 feet 6-inch, and 5,000 feet 12-inch water pipe.
1940	Aug. 27	Washington Asphalt, Block, and Tile Co., Washington, D. C.	Asphalt paving blocks and tiles.
1965	Sept. 3	Builders Iron Foundry, Providence, R. I.	200,000 pounds special castings for water mains.
1989	Sept. 13	The Frederick Brick Works, Frederick, Md.	Paving bricks.
2002	Sept. 10	McCanless Bros., Salisbury, N. C. ....	6 by 20 inch and 8 by 8 inch granite curbing.
2005	Sept. 26	John M. Mack, Philadelphia, Pa. ....	Vitrified paving blocks.
2006	Sept. 15	Rennie & McIntosh, Granite, Va. ....	8 by 8 inch granite curbing.
2012	Oct. 5	Jas. T. Summers, Washington, D. C. ....	Screened pebbles.
2014	Sept. 27	McMahan, Porter & Co., New Cumberland, W. Va.	Vitrified paving brick.
2015	Oct. 6	Cedar Cliff Cement Co., Washington, D. C.	Natural cement.
2022	Oct. 22	The Atlas Cement Co., New York City.	Portland cement.
2024	Oct. 24	Potomac Terra Cotta Co., Washington, D. C.	Terra-cotta material.
2026	Oct. 29	Thos. Somerville & Sons, Washington, D. C.	Do.
2030	Nov. 1	Savage Fire Brick Co., Keystone Junction, Pa.	Vitrified brick for sewer inverts.
2031	Oct. 19	Washington Brick and Terra Cotta Co., Washington, D. C.	Sewer bricks.
2039	Nov. 10	Asa B. Cook, Petersburg, Va. ....	Granite curbing.
2041	Nov. 22	Angus Lamond, Takoma, D. C. ....	Vitrified invert blocks.
2044	Dec. 7	Andrew H. Haig, Philadelphia, Pa. ....	Fire hydrants.
2045	Dec. 10	Ludlow Valve Manufacturing Co., Philadelphia, Pa.	Street hydrants.
2049	1895. Jan. 2	McNeal Pipe and Foundry Co., Burlington, N. J.	Cast-iron pipe.
2063	Mar. 14	M. J. Drummond, New York City. ....	16,500 feet 6 inch cast-iron water pipe.
2066	Mar. 26	John Burns, Washington, D. C. ....	26 side traps and 10 corner-trap frames and covers.
2068	Mar. 28	The Brandywine Granite Co., Wilmington, Del.	16,000 feet 8 by 8 inch straight and 850 feet 8 by 8 inch circular curb.
2069	Apr. 10	Francis Jones, Lithonia, Ga. ....	20,800 feet 6 by 20 inch straight and 1,044 feet 6 by 20 inch circular curb.
2083	June 7	Pennsylvania Globe Gaslight Co., Philadelphia, Pa.	300 street lanterns.
2092	June 24	Jas. T. Summers, Washington, D. C. ....	Sand and pebbles.
2094	....do....	The Frederick Brick Works, Frederick, Md.	Paving bricks.
2095	June 25	John M. Mack, Philadelphia, Pa. ....	Vitrified paving blocks.
2096	June 28	Harris Bros. & Lane, Zanesville, Ohio.	Do.

*Proposals for street lighting per annum, opened June 3, 1895.*

Bidder.	100 electric lamps, each per annum.	Each additional 100 electric lamps, or fraction thereof, per annum.	400 gas lamps west of Rock Creek.	Each additional 400 gas lamps, or fraction thereof, west of Rock Creek.	4,000 gas lamps east of Rock Creek.	Each additional 4,000 gas lamps, or fraction thereof, east of Rock Creek.	1,000 naphtha lamps.	Each additional 1,000 naphtha lamps, or fraction thereof.	Remarks.
Washington Gas Light Co., Washington, D. C.	None received.	None received.	-----	-----	\$20.50	\$20.50	-----	-----	Modified bid. Prices based upon specifications of present contract. See letter. Do.
Georgetown Gas Light Co., West Washington, D. C.	-----	-----	\$20.50	\$20.50	-----	-----	-----	-----	-----
Nicolai Bros., Washington, D. C.	-----	-----	-----	-----	-----	-----	\$20.40	\$20.40	-----
Pennsylvania Globe Gas Light Co., Philadelphia, Pa.	-----	-----	-----	-----	-----	-----	20.25	20.25	Bid accepted. Will agree to furnish their own lanterns free of cost placed on posts, together with all lamps not in first-class condition and fit for use. Will place lantern on post at their expense, to be used during continuation of contract, and to be removed and become their property at expiration of contract. See letter.
Standard Oil Co., Washington, D. C.	-----	-----	-----	-----	-----	-----	21.25	21.25	No deposit with bid.
Potomac Light and Power Co., West Washington, D. C.	-----	-----	-----	-----	-----	-----	-----	-----	Request consideration of bids delayed.

*Proposals for improvement of streets, opened October 12, 1894.*

[Per square yard.]

Bidder.	12th street, between Lincoln Park and Pa. avenue SE., gravel roadway.	D street, between 9th street and K. avenue SE., gravel roadway.	C street, between 12th street and Tenn. avenue NE., gravel roadway.	15th street, between East Capitol and Estreets NE., gravel roadway.
Colton & Bolden, Washington, D. C.	\$1.68½	\$1.73½	\$1.72½	\$1.68½
M. T. Talty, Washington, D. C.	.62	.59	.60	.54
Andrew Gleason, Washington, D. C.	.65	.70	.75	.63½
Washington Asphalt Block and Tile Co.	.63	1.49	.70	.64
Hussey & Brown, Washington, D. C.	.63	.60	.80	.72
Buckley & Larguey, Washington, D. C.	1.21	-----	-----	-----
John Cudmore and James Frawley, Washington, D. C.	1.59	.66	.66	.61
Lyons Bros., Washington, D. C.	.86	.67	.91	.79

<sup>1</sup> Bids accepted. Bids for C street and Fifteenth street rejected.*Proposals for excavating and constructing embankment for reservoir at Keno, opened September 21, 1894.*

Bidder.	Per cubic yard.	Bidder.	Per cubic yard.
Eslin, C. H., Washington, D. C. <sup>1</sup>	\$0.15	Killeen, George, Washington, D. C.	\$0.24
Gleason, Andrew, Washington, D. C.	.29	Allen, W. H. H., Washington, D. C.	.15½
Hussey & Brown, Washington, D. C.	.20½	Oates, J. R., Washington, D. C.	.16½
Smith, J. P., Washington, D. C.	.21½	Lyons Bros., Washington, D. C.	.17½
McNamara, M., Washington, D. C.	.19½	Myers, M. M., Washington, D. C.	.17½

<sup>1</sup> Bid accepted.

# 206      ENGINEER DEPARTMENT, DISTRICT OF COLUMBIA.

*Proposals for laying and relaying granite block pavement on High street, between M and N streets NW., opened October 13, 1894.*

Bidder.	Per square yard.	Remarks.
Hussey & Brown, Washington, D. C.....	\$0. 98	Bid accepted.
J. E. Lyons & Bro., Washington, D. C.....	. 99	

*Proposals for improving Prospect street, opened August 22, 1894.*

	Geo. Killeen, <sup>1</sup> Washing- ton, D. C.	E. G. Gummel, Washing- ton, D. C.
Grading 5,000 cubic yards:		
Per cubic yard.....	\$0. 19½	\$0. 35
Total.....	975. 00	1, 750. 00
Laying 450 square yards gutter flags and cobble gutters:		
Per square yard.....	. 21	. 29
Total.....	94. 50	130. 50
Hauling 450 square yards cobble and flag, per mile:		
Per square yard.....	. 04	. 05
Total.....	18. 00	22. 50
Hauling and setting 1,325 linear feet curb:		
Per linear foot.....	. 21	. 14
Total.....	291. 50	185. 50
Total.....	1, 379. 00	2, 088. 00

<sup>1</sup> Bid accepted.

*Proposals for laying sheet asphalt and asphalt block pavements, opened September 4, 1894.*

Bidder.	Standard asphalt pavement on 6-inch hydraulic base (22,230 square yards).		Standard asphalt pavement on 4-inch hydraulic base (22,230 square yards).		Standard asphalt pavement on cobble base (4,890 square yards).	
	Price.	Cost.	Price.	Cost.	Price.	Cost.
The Cranford Paving Co., Washington, D. C. <sup>1</sup> .....	\$1. 68	\$37, 346. 40	\$1. 53	\$34, 011. 90	\$1. 60½	\$7, 863. 12
Thomas H. Thomas, New York City <sup>2</sup> .....	2. 05	45, 571. 50	1. 85	41, 125. 50	1. 55½	7, 603. 95
Barber Asphalt Paving Co., New York City.....	2. 25	50, 017. 50	2. 00	44, 460. 00	1. 65½	8, 092. 50

Bidder.	Standard asphalt pavement on macadam base (4,240 square yards).		Asphalt block pavement on cobble base (15,406 square yards).		Asphalt block pavement on concrete base (15,406 square yards).	
	Price.	Cost.	Price.	Cost.	Price.	Cost.
The Cranford Paving Co., Washington, D. C. <sup>1</sup> .....	\$1. 60½	\$6, 817. 92				
Thomas H. Thomas, New York City <sup>2</sup> .....	1. 55½	6, 597. 44				
Barber Asphalt Paving Co., New York City.....	1. 65½	7, 017. 00				
Washington Asphalt Block and Tile Co., Washington, D. C. <sup>3</sup> .....			\$1. 78	\$27, 422. 68	\$2. 25	\$34, 663. 50

<sup>1</sup> Bid accepted for all except cobble and macadam base.

<sup>2</sup> Bid accepted for pavement on cobble and macadam base.

<sup>3</sup> Bid accepted for asphalt blocks.



*Proposals for laying asphalt and asphalt block pavements, opened April 19, 1895.*

Bidder.	Asphalt, 6-inch base.	Asphalt, 4-inch base.	Asphalt, cobble, rubble, and macadam base.	Asphalt binder.	Bit base.	Asphalt block, wood base.	Asphalt block, concrete base.	Remarks.
The Cranford Paving Co., Washington, D. C.	\$2.19	\$1.94	\$1.18	\$7.20	\$5.00	-----	-----	Bid accepted.
Eastern Bernudez Asphalt Paving Co., New York City.	2.21	1.97	.98	12.00	3.50	-----	-----	
Washington Asphalt Block and Tile Co., Washington, D. C.	-----	-----	-----	-----	-----	\$1.84	\$2.25	Do.

*Proposals for grading sidewalks on Eighteenth street, between Florida avenue and Columbia road, opened December 10, 1894.*

Bidder.	Grading, etc., per cubic yard.	Remarks.
M. F. Talty, Washington, D. C.	\$0.15 $\frac{1}{2}$	Bid accepted.
Andrew Gleeson, Washington, D. C.	.17	

*Proposals for grading sidewalk, First street NW. extended, opened January 9, 1895.*

Bidder.	Price per cubic yard.	Remarks.
M. F. Talty, Washington, D. C.	\$0.21	
Albert Gleeson, Washington, D. C.	.20 $\frac{1}{2}$	
Richard Horn, sr., and Darius Gaskins, Washington, D. C.	.17	Bid accepted.
Andrew Gleeson, Washington, D. C.	.19	

*Proposals for grading entrance to Zoological Park, from Woodley Lane road, opened December 26, 1894.*

Bidder.	Price per cubic yard.	Remarks.
Andrew Gleeson, Washington, D. C.	\$0.29 $\frac{1}{2}$	
Skinner & Burrows, Washington, D. C.	.23 $\frac{1}{2}$	Bid accepted.

*Proposals for improving streets, opened November 6, 1894.*

[Lay gravel roadway pavement, per square yard.]

Bidder.	15th street NE., East Capitol to E street.	C street NE., 12th street to Tenn. avenue.	M street NE., 12th street to Trinidad avenue.
M. F. Talty, Washington, D. C.	\$0.80	\$0.80	\$0.79
Hussey & Brown, Washington, D. C.	.82	.78	-----
McGraw, Almy & Malone, Washington, D. C.	.94	.94	.94
Lyons Bros., Washington, D. C.	.59 $\frac{1}{2}$	.74 $\frac{1}{2}$	1.49 $\frac{1}{2}$
Andrew Gleeson, Washington, D. C.	.63	.69	.85
Buckley & Larguey, Washington, D. C.	.59	.74	.66
Charles H. Eslin, Washington, D. C.	.61	1.65	.85
Washington Asphalt Block and Tile Co., Washington, D. C.	1.59	.67	-----

1 Bid accepted.

*Proposals for constructing culverts on Albemarle street, between Grant road and Connecticut avenue extended, opened April 12, 1895.*

Bidder.	Rubble masonry (175 cubic yards).		Brick masonry (45 cubic yards).		Total cost.	Days to com- mence.	Days to com- plete.
	Price.	Cost.	Price.	Cost.			
Skinner & Burrows, Washington, D. C.	\$5.90	\$1,032.50	\$9.80	\$441.00	\$1,473.50	5	25
Michael H. Cavanaugh, Washington, D. C. <sup>1</sup>	4.90	857.50	6.40	288.00	1,145.50	5	35
Wm. Lanahan, Washington, D. C.	6.35	1,111.25	8.10	364.50	1,475.75	5	60
Breen & Feely, Washington, D. C.	6.04	1,057.00	11.57	520.65	1,577.65	10	35
Lyons Bros., Washington, D. C.	7.13	1,247.75	11.87	520.65	1,768.40	10	60
M. McNamara, Washington, D. C.	5.50	962.50	9.50	427.50	1,390.00	10	60
Frank Baldwin, Washington, D. C.	8.00	1,400.00	10.00	450.00	1,850.00	5	40
Thos. McCormick, Washington, D. C.	6.80	1,190.00	7.90	355.50	1,545.00	5	30

<sup>1</sup> Bids accepted.

<sup>2</sup> Working days.

*Proposals for improving Florida avenue, from New York avenue to Brentwood road; Delaware avenue SW., from G to K streets; Eleventh street NE., from Maryland avenue to Florida avenue; opened May 3, 1895.*

#### FLORIDA AVENUE, FROM NEW YORK AVENUE TO BRENTWOOD ROAD.

[3,000 square yards.]

Bidders.	Laying macadam pavement.	Total.	Remarks.
	<i>Per sq. yd.</i>		
Andrew Gleeson, Washington, D. C.	\$0.68	\$2,040.00	To be completed in 100 days.
Lyons Bros., Washington, D. C.	.77½	2,332.50	To be completed by January, 1895.
Thos. Buckley, Washington, D. C.	.75	2,250.00	To be completed in 25 days.
C. H. Eslin, Washington, D. C.	.71	2,130.00	To be completed in 60 days.
J. J. Cudmore and J. Frawley, Washing- ton, D. C.	.57½	1,732.00	Accepted. To be completed in 40 working days.
M. F. Talty, Washington, D. C.	.65	1,950.00	To be completed in 100 days.

#### DELAWARE AVENUE SW., FROM G TO K STREETS.

[5,200 square yards.]

Andrew Gleeson, Washington, D. C.	\$0.70	\$3,640.00	To be completed within 100 days.
Lyons Bros., Washington, D. C.	.72½	3,783.00	To be completed in year 1895.
Thos. Buckley, Washington, D. C.	.71	3,692.00	To be completed in 40 days.
C. H. Eslin, Washington, D. C.	.72	5,744.00	To be completed in 60 days.
J. J. Cudmore and J. Frawley, Washing- ton, D. C.	.67½	3,523.00	Accepted. To be completed in 90 days.
M. F. Talty, Washington, D. C.	.68	3,536.00	To be completed in 120 days.

#### ELEVENTH STREET NE., BETWEEN MARYLAND AND FLORIDA AVENUES.

[6,000 square yards.]

Andrew Gleeson, Washington, D. C.	\$0.68	\$4,080.00	Accepted. To be completed in 120 days.
Lyons Bros., Washington, D. C.	.78½	4,710.00	To be completed in year 1895.
Thos. Buckley, Washington, D. C.	.89	5,340.00	To be completed in 90 days.
C. H. Eslin, Washington, D. C.	.75	4,500.00	To be completed in 120 days.
J. J. Cudmore and J. Frawley, Washing- ton, D. C.	.78½	4,725.00	To be completed in 100 days.
Horn & Gaskins, Washington, D. C.	.84½	5,070.00	To be completed in 90 days.
M. F. Talty, Washington, D. C.	.70	4,200.00	To be completed in 120 days.

*Proposals for improving Kenesaw avenue from Fifteenth street to Zoological Park.*

Bidder.	For laying gravel roadway (6,600 square yards).		For grading (18,000 cubic yards).		Total.	Remarks.
	Price.	Cost.	Price.	Cost.		
M. F. Talty, Washington, D. C..	\$0.10	\$660.00	\$0.20	\$3,600.00	\$4,260.00	To be completed in 120 days.
Andrew Gleeson, Washington, D. C.	.15	990.00	.17	3,060.00	4,050.00	Accepted. To be completed in 4 months.
Lyons Bros., Washington, D. C..	.15	990.00	.17½	3,190.00	4,185.00	To be completed in 90 days.
Cudmore & Frawley, Washington, D. C.	.15½	1,006.50	.18½	3,285.00	4,291.00	To be completed in 75 working days.
Horn & Gaskins, Washington, D. C.	.19	1,254.00	.22	3,960.00	5,214.00	To be completed in 90 days.
R. G. Israel, Washington, D. C..	.17½	1,155.00	.18½	3,330.00	4,485.00	To be completed in 120 days.
Langhorne, Allen & Co., Washington, D. C.	.35	2,310.00	.15	2,700.00	5,010.00	To be completed in 90 days.
W. E. Chaffee, Washington, D. C.	.20½	1,369.50	.18	3,240.00	4,609.00	To be completed in 75 days.
Geo. B. Mullin, Washington, D. C.	.21	1,386.00	.27	4,860.00	6,246.00	To be completed in 100 days.

*Proposals for improving streets in Meridian Hill subdivision.*

Bidder.	For grading (25,000 cubic yards).		For setting curb (1,100 linear feet).		Laying macadam roadway (2,000 square yards).		Laying and relaying cobble gutters (500 square yards).		Laying and relaying sidewalks (600 square yards).		Total.
	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	
M. F. Talty, Washington, D. C. <sup>1</sup>	\$0.24	\$6,000.00	\$0.15	\$165.00	\$0.60	\$1,200.00	\$0.20	\$100.00	\$0.25	\$150.00	\$7,615.00
Andrew Gleeson, Washington, D. C. <sup>2</sup>	.25	6,250.00	.15	165.00	.60	1,200.00	.20	100.00	.25	150.00	7,860.00
Lyons Bros., Washington, D. C. <sup>3</sup>	.30	7,500.00	.15	165.00	.60	1,200.00	.20	100.00	.25	150.00	9,110.00

<sup>1</sup> Accepted. To be completed in 180 days.<sup>2</sup> To be completed in 5 months.<sup>3</sup> To be completed by December 31, 1895.*Proposals for improving Spring street, Anacostia.*

Bidder.	For grading (5,500 square yards).		Cobble gutters (235 square yards).		Total.	Remarks.
	Price.	Cost.	Price.	Cost.		
M. F. Talty, Washington, D. C..	\$0.30	\$1,650.00	\$0.20	\$47.00	\$1,697.50	To be completed in 90 days.
Lyons Bros., Washington, D. C..	.17½	976.25	.20	47.00	1,023.25	To be completed in 60 days.
Cudmore & Frawley, Washington, D. C.	.17½	948.75	.20	47.00	995.00	Accepted. To be completed in 50 working days.
Collins & Burke, Washington, D. C.	.23½	1,292.50	.20	47.00	1,339.50	To be completed in 35 days.
H. A. Griswold, Anacostia, D. C.	.19½	1,086.25	.20	47.00	1,133.25	To be completed in 60 days.

*Proposals for grading Albemarle and Thirty-eighth streets, opened April 30, 1895.*

Bidder.	Price per cubic yard.	Days to complete.	Remarks.
Andrew Gleeson, Washington, D. C .....	\$0. 22	120	Bid accepted.
Knight & Mullin, Washington, D. C .....	. 21½	120	
Skinner & Burrows, Washington, D. C .....	. 24½	90	

*Proposals for grading alleys in Anacostia, opened May 22, 1895.*

[3,300 cubic yards.]

Bidder.	Price per cubic yard.	Total cost.	Remarks.
H. A. Griswold, Anacostia, D. C .....	\$0. 19½	\$651. 75	Bid accepted.
James Frawley, Washington, D. C .....	. 18½	618. 75	
Horn & Gaskins, Washington, D. C .....	. 21	693. 00	

*Proposals for grading Phelps and Le Roy places, opened June 25, 1895.*

Bidder.	Price per cubic yard.	Remarks.
M. F. Talty, Washington, D. C .....	\$0. 58	Bid accepted.
Horn & Gaskins, Washington, D. C .....	. 37½	
R. G. Israel, Washington, D. C .....	. 65	

*Proposals for grading Massachusetts avenue extended, opened September 4, 1894.*

Bidder.	Per cubic yard.	Remarks.
A. Gleeson, Washington, D. C .....	\$0. 29½	Bid accepted.
R. G. Israel, Washington, D. C .....	. 22½	
E. G. Gummel, Washington, D. C .....	. 39½	
Jno. E. Lyons, Washington, D. C .....	. 40	

*Proposals for improving Twelfth street NE. extended and Pennsylvania avenue extended, opened August 30, 1894.*

Bidder.	Twelfth street NE. extended.			Pennsylvania avenue extended.			Remarks.
	Grading, per cubic yard.	Graveling, per square yard.	Setting curb, per linear foot.	Grading, per cubic yard.	Graveling, per square yard.	Setting curb, per linear foot.	
Lyons Bros., Washington, D. C .....	\$0. 19½	\$0. 23	.....	\$0. 22	\$0. 19	.....	Bid accepted for Twelfth street extended.
Chas. H. Eslin, Washington, D. C .....	. 20½	. 23½	\$0. 25	. 22	. 16	\$0. 25	
Geo. Killeen, Washington, D. C .....	. 21	. 34	.....	. 25	. 15	.....	
E. G. Gummel, Washington, D. C .....	. 16½	. 24	.....	. 29	. 24	.....	
Andrew Gleeson, Washington, D. C .....	. 20	. 20	.....	. 19½	. 18	.....	
Jas. Frawley, Washington, D. C .....	. 17½	. 25	. 32	. 22	. 21	. 27	Bid accepted for Pennsylvania avenue extended.
A. N. Brady, Washington, D. C .....	.....	.....	.....	. 19½	. 16½	.....	
R. & M. Horan, Washington, D. C .....	.....	.....	.....	. 22	. 25	. 18	

*Proposals for improving Prospect street, opened August 22, 1894.*

Bidder.	Grading (5,000 square yards).		Laying gutter flags and cobble gutters (450 square yards).		Hauling cobble and flag (450 square yards), per mile.		Hauling and setting curb (1,325 linear feet).		Total.	Remarks.
	Cubic yard.	Total.	Square yard.	Total.	Square yard.	Total.	Linear foot.	Total.		
George Killeen, Washington, D. C.	\$0. 19½	\$975. 00	\$0. 21	\$94. 50	\$0. 04	\$18. 00	\$0. 22	\$291. 50	\$1, 379. 00	Bid accepted.
E. G. Gummel, Washington, D. C.	. 35	1, 750. 00	. 29	130. 50	. 05	22. 50	. 14	185. 50	2, 088. 50	

*Proposals for improving road from Broad Branch road to Chevy Chase Circle, opened April 5, 1895.*

Bidder.	For broken quartz macadam (9,000 square yards).		For macadam other than broken quartz (9,000 square yards).		For grading (3,000 cubic yards).		Total for broken quartz macadam.	Total for macadam other than broken quartz.	Remarks.
	Price.	Cost.	Price.	Cost.	Price.	Cost.			
M. F. Talty, Washington, D. C.	\$0. 65	\$5, 850	\$0. 65	\$5, 850	. 30	\$900	\$6, 750	\$6, 750	To be completed in 90 days.
Lyons Bros., Washington, D. C.	. 53	4, 770	. 72	6, 480	. 30	900	5, 670	7, 380	Accepted; to be completed by Aug. 1, 1895.
Martin McNamara, Washington, D. C.	. 57	5, 130	. 46	4, 140	. 22	660	5, 790	4, 800	To be completed in 120 days.
G. B. Mullin, Washington, D. C.	. 97	8, 730	. 79	7, 110	. 23	690	9, 420	7, 800	To be completed in 90 days.

*Proposals for improving Massachusetts avenue extended, opened April 5, 1895.*

Bidder.	Grading 30,000 cubic yards.		Remarks.
	Price.	Cost.	
M. F. Talty, Washington, D. C. ....	\$0. 35	\$13, 650. 00	To be completed in 180 days.
Andrew Gleeson, Washington, D. C. ....	. 29	11, 310. 00	To be completed by Nov. 1, 1895.
Lyons Bros., Washington, D. C. ....	. 29	11, 310. 00	To be completed by Dec. 31, 1895; additional price if rock is encountered.
R. G. Israel, Washington, D. C. ....	. 34½	13, 552. 00	To be completed in 120 days.
Langhorne, Allen & Co., Washington, D. C. ....	. 26	10, 140. 00	Accepted, and to be completed in 120 days.
Skinner & Burrows, Washington, D. C. ....	. 26½	10, 335. 00	To be completed in 120 days.

*Proposals for construction of sewers, opened July 28, 1894.*

Bidder.	Section A. <sup>1</sup>		Section B. <sup>1</sup>		Section C. <sup>1</sup>	
	4-foot brick (300 feet).	Man-holes.	2.75 by 4.125 feet brick (400 feet).	Man-holes.	2.25 by 3.375 feet brick (380 feet).	Man-holes.
Wm. Hussey and Thos. A. Brown, Washington, D. C.	\$8.00	\$25.00	\$7.80	\$30.00	\$7.25	\$30.00
Jas. McCandlish, Washington, D. C.	5.79	22.00	7.45	38.00	5.97	38.00
M. F. Talty, Washington, D. C.	6.45	25.00	8.40	35.00	8.15	35.00
Geo. S. Good & Co., Lock Haven, Pa.	6.60	1.00	7.75	1.00	6.60	1.00
R. H. Lamb, Washington, D. C.	5.84	15.00	6.05	25.00	5.37	25.00
E. G. Gummel, Washington, D. C.	6.75	19.00	7.63	29.00	6.20	29.00
B. J. Coyle, Washington, D. C.	7.25	35.00	8.30	50.00	6.40	48.00
Jno. E. Lyons, Washington, D. C.	6.39	30.00	7.24	45.00	6.36	45.00

Bidder.	Section C. <sup>1</sup>		Section D. <sup>1</sup>		Section E.	
	2 by 3 feet brick (370 feet).	Man-holes.	2.5 by 3.75 feet brick (355 feet).	Man-holes.	24-inch pipe (330 feet).	Man-holes.
P. Brennan, Washington, D. C.					\$2.20	\$25.00
Wm. Hussey and Thos. A. Brown, Washington, D. C.	\$7.00	\$25.00	\$6.25	\$25.00	2.75	25.00
Ralph Wormley, Washington, D. C. <sup>2</sup>					1.60	20.00
Jas. McCandlish, Washington, D. C.	5.37	38.00	5.94	25.00	1.75	27.00
M. F. Talty, Washington, D. C.	6.40	32.00	6.30	30.00	1.85	25.00
Geo. S. Good & Co., Lock Haven, Pa.	6.00	1.00	6.30	1.00		
R. H. Lamb, Washington, D. C.	4.92	25.00	4.85	25.00	1.78	27.00
E. G. Gummel, Washington, D. C.	5.51	29.00	5.84	28.00	1.57	25.00
B. J. Coyle, Washington, D. C.	5.85	45.00	6.80	40.00		
Jno. E. Lyons, Washington, D. C.	5.67	40.00	6.15	38.00	1.95	30.00

Bidder.	Section F.		Section G.		Section H.	
	24-inch pipe (630 feet).	Man-holes.	4-foot concrete (300 feet).	Man-holes.	2.75 by 4.125 feet concrete (400 feet).	Man-holes.
P. Brennan, Washington, D. C.	\$2.20	\$25.00				
Wm. Hussey and Thos. A. Brown, Washington, D. C.	2.75	25.00	\$7.75	\$25.00	\$7.55	\$30.00
Ralph Wormley, Washington, D. C.	1.66	20.00				
Jas. McCandlish, Washington, D. C.	1.66	30.00	\$5.55	\$22.00		
M. F. Talty, Washington, D. C.	1.85	25.00				
R. H. Lamb, Washington, D. C.	1.98	27.00	5.74	15.00	\$5.50	\$25.00
E. G. Gummel, Washington, D. C.	\$1.59	\$25.00				
B. J. Coyle, Washington, D. C.			6.90	35.00	7.75	50.00
Jno. E. Lyons, Washington, D. C.	2.09	35.00	6.25	30.00	7.20	45.00

Bidder.	Section I.			Section K.		
	2.25 by 3.375 feet concrete (380 feet).	Man-holes.	2 by 3 feet concrete (370 feet).	Man-holes.	2.5 by 3.75 feet concrete (355 feet).	Man-holes.
Wm. Hussey and Thos. A. Brown, Washington, D. C.	\$7.00	\$30.00	\$7.00	\$25.00	\$6.00	\$25.00
Jas. McCandlish, Washington, D. C.					5.33	25.00
R. H. Lamb, Washington, D. C.	\$5.15	\$25.00	\$4.18	\$25.00	\$4.67	\$25.00
B. J. Coyle, Washington, D. C.	6.00	48.00	5.50	45.00	6.45	40.00
Jno. E. Lyons, Washington, D. C.	6.05	45.00	5.55	40.00	6.10	38.00

<sup>1</sup>Sections A, B, C, and D rejected.

<sup>2</sup>Bid accepted.



*Proposals for construction of sewers, opened September 12, 1894.*

Bidder.	Section A.		Section B.			
	2 by 3 foot con- crete (per lin- ear foot).	Man- holes (each).	2.5 by 3.75 foot concrete (per lin- ear foot).	Man- holes (each).	2 by 3 foot con- crete (per lin- ear foot).	Man- holes (each).
Hussey & Brown, Washington, D. C. ....	\$5.00	\$23.00	\$5.70	\$23.00	\$4.80	\$23.00
Lyons Bros., Washington, D. C. ....	4.15	35.00	5.65	30.00	4.50	30.00
Andrew Gleeson, Washington, D. C. ....	5.40	25.00	9.15	25.00	5.40	25.00
Buckley & Larguey, Washington, D. C. ....	4.60	25.00	5.85	23.00	4.50	23.00
Jas. McCandlish, Washington, D. C. ....	5.14	25.00	6.19	25.00	5.13	27.00
R. H. Lamb, Washington, D. C. ....	4.74	25.00	6.42	25.00	4.77	20.00
E. G. Gummel, Washington, D. C. ....	4.12	27.00	5.61	25.00	4.20	25.00

Bidder.	Section C.						Section D.			
	2.75 by 4.125 foot con- crete (per linear foot).	Man- holes (each).	2.5 by 3.75 foot con- crete (per linear foot).	Man- holes (each).	2.25 by 3.375 foot con- crete (per linear foot).	Man- holes (each).	3.25 by 4.875 foot con- crete (per linear foot).	Man- holes (each).	3 by 4.5 foot con- crete (per linear foot).	Man- holes (each).
Hussey & Brown, Washing- ton, D. C. ....	\$6.75	\$23.00	\$4.00	\$23.00	\$5.50	\$23.00	\$8.50	\$23.00	\$7.00	\$23.00
Lyons Bros., Washington, D. C. ....	6.30	40.00	4.34	30.00	4.75	30.00	6.40	30.00	6.30	30.00
Andrew Gleeson, Washing- ton, D. C. ....	6.61	30.00	5.97	30.00	5.33	30.00	6.60	25.00	5.73	25.00
Buckley & Larguey, Wash- ington, D. C. ....	5.73	23.00	4.10	23.00	4.10	23.00	6.63	25.00	5.95	25.00
Jas. McCandlish, Washing- ton, D. C. ....	6.42	35.00	4.18	16.00	4.14	25.00	7.38	25.00	6.33	25.00
R. H. Lamb, Washington, D. C. ....	6.80	25.00	4.63	20.00	-----	-----	7.00	20.00	6.82	25.00
B. J. Coyle, Washington, D. C. ....	-----	-----	-----	-----	-----	-----	5.70	30.00	5.40	30.00
E. G. Gummel, Washington, D. C. ....	6.41	25.00	4.78	25.00	4.57	25.00	5.79	27.00	5.69	27.00
P. Brennan, Washington, D. C. ....	7.05	30.00	5.07	25.00	4.88	25.00	7.19	25.00	6.79	25.00

Bids for sections A and B rejected.

Bids for section C, by Buckley &amp; Larguey, accepted.

Bids for section D, by B. J. Coyle, accepted.

*Proposals for construction of sewers, opened September 22, 1894—Continued.*

Bidder.	Section E.		Section F.		Section G.			
	2.25 by 3.375 foot concrete (per linear foot).	Man-holes (each).	2 by 3 foot brick (per linear foot).	Man-holes (each).	2.5 by 3.75 foot brick (per linear foot).	Man-holes (each).	2 by 3 foot brick (per linear foot).	Man-holes (each).
Hussey & Brown, Washington, D. C.	\$6.00	\$23.00	\$5.50	\$23.00	\$6.00	\$23.00	\$5.30	\$23.00
Jno. E. Lyons, Washington, D. C.	5.38	35.00	4.25	30.00	5.80	30.00	4.65	30.00
Andrew Gleeson, Washington, D. C.	6.96	30.00	5.50	25.00	9.25	25.00	5.50	25.00
Buckley & Larguey, Washington, D. C.	4.75	25.00	5.00	25.00	6.30	23.00	4.90	23.00
Jas. McCandlish, Washington, D. C.	5.50	25.00	5.44	25.00	6.44	25.00	5.33	27.00
R. H. Lamb, Washington, D. C.	5.43	25.00	4.97	25.00	7.20	25.00	5.67	20.00
E. G. Gummel, Washington, D. C.	4.52	29.00	4.12	27.00	5.61	25.00	4.20	25.00
M. F. Talty, Washington, D. C.	.....	.....	5.52	30.00	6.90	30.00	5.30	30.00
P. Brennan, Washington, D. C.	5.51	25.00	.....	.....	.....	.....	.....	.....

Bidder.	Section H.				Section I.			
	2.75 by 4.125 foot brick (per linear foot).	Man-holes (each).	2.5 by 3.75 foot brick (per linear foot).	Man-holes (each).	2.25 by 3.75 foot brick (per linear foot).	Man-holes (each).	3.25 by 4.375 foot brick (per linear foot).	Man-holes (each).
Hussey & Brown, Washington, D. C.	\$7.25	\$23.00	\$4.50	\$23.00	\$6.00	\$23.00	\$9.00	\$23.00
Jno. E. Lyons, Washington, D. C.	6.40	40.00	4.45	30.00	4.85	30.00	6.50	30.00
Andrew Gleeson, Washington, D. C.	6.71	30.00	5.07	30.00	5.43	30.00	6.70	25.00
Buckley & Larguey, Washington, D. C.	6.20	23.00	4.65	23.00	4.65	23.00	7.00	23.00
Jas. McCandlish, Washington, D. C.	6.77	35.00	4.48	15.00	4.24	20.00	7.77	25.00
R. H. Lamb, Washington, D. C.	7.43	25.00	5.21	20.00	.....	.....	7.29	25.00
B. J. Coyle, Washington, D. C.	7.00	40.00	4.50	12.00	4.60	30.00	6.40	30.00
E. G. Gummel, Washington, D. C.	6.41	25.00	4.78	25.00	4.57	25.00	5.79	27.00
M. F. Talty, Washington, D. C.	7.50	30.00	4.90	20.00	5.70	20.00	7.90	30.00
P. Brennan, Washington, D. C.	7.15	30.00	5.17	25.00	4.98	25.00	7.29	25.00

Bids for sections E, H, and I rejected.

Bids for sections F and G, by E. G. Gummel, accepted.

*Proposals for construction of sewers, opened September 12, 1894—Continued.*

Bidder.	Section K.			Section L.				
	2.25 by 3.375 foot brick (per linear foot).	Man- holes (each).	21-inch pipe (per linear foot).	Man- holes (each).	24-inch pipe (per linear foot).	Man- holes (each).	18-inch pipe (per linear foot).	Man- holes (each).
Jas. L. Cotten, Washington, D. C.			\$1.65	\$22.98	\$1.74 <sup>1</sup>	\$22.98	\$1.74 <sup>1</sup>	\$22.98
Hussey & Brown, Washington, D. C.	\$6.50	\$23.00	1.95	23.00	2.10	23.00	1.80	23.00
Jno. E. Lyons, Washington, D. C.	5.50	35.00	2.05	35.00	2.56	30.00	1.59	30.00
Andrew Gleeson, Washington, D. C.	7.06	30.00						
Ralph Wormley, Washington, D. C.			1.60	22.50	1.62	23.50	1.59	22.50
Buckley & Larguey, Washington, D. C.	5.25	25.00	1.85	25.00	2.00	25.00	1.40	25.00
Jas. McCandlish, Washington, D. C.	5.97	27.00	1.95	28.00	2.25	32.00	1.75	25.00
R. H. Lamb, Washington, D. C.	6.15	25.00	1.95	25.00	2.15	25.00	1.60	25.00
B. J. Coyle, Washington, D. C.	5.15	35.00						
E. G. Gummel, Washington, D. C.	4.52	29.00	1.50	29.00	1.81	29.00	1.37	29.00
M. F. Talty, Washington, D. C.	5.90	30.00	1.70	30.00	1.90	30.00	1.40	30.00
P. Brennan, Washington, D. C.	5.61	25.00	2.20	25.00	2.65	25.00	1.75	25.00

Bidder.	Section M.				Section N.			
	24-inch pipe (per linear foot).	Man- holes (each).	21-inch pipe (per linear foot).	Man- holes (each).	15-inch pipe (per linear foot).	Man- holes (each).	24-inch pipe (per linear foot).	Man- holes (each).
Jas. L. Cotten, Washington, D. C.	\$1.85 <sup>1</sup>	\$22.98					( <sup>1</sup> )\$1.89 <sup>1</sup>	\$22.98
Hussey & Brown, Washington, D. C.	2.25	25.00	\$1.75	\$25.00	\$1.90	\$25.00	2.10	25.00
Jno. E. Lyons, Washington, D. C.	1.90	30.00	1.65	30.00	1.57	30.00	3.25	40.00
Ralph Wormley, Washington, D. C.	1.59	23.50						
Buckley & Larguey, Washington, D. C.	1.80	18.00	1.60	18.00	1.60	18.00	2.40	25.00
R. H. Lamb, Washington, D. C.			2.40	25.00	2.40	25.00	2.45	25.00
E. G. Gummel, Washington, D. C.	<sup>1</sup> 1.31	19.00	1.43	21.00	1.22	23.00	1.91	29.00
M. F. Talty, Washington, D. C.	1.50	20.00	1.50	20.00	1.30	25.00		

Bidder.	Section O.		Section P.			
	24-inch pipe (per linear foot).	Man- holes (each).	21-inch pipe (per linear foot).	Man- holes (each).	18-inch pipe (per linear foot).	Man- holes (each).
Hussey & Brown, Washington, D. C.	\$2.20	\$25.00	\$2.15	\$25.00	\$1.90	\$23.00
Jno. E. Lyons, Washington, D. C.	2.95	40.00	3.00	40.00	2.75	40.00
Buckley & Larguey, Washington, D. C.	2.30	25.00	1.60	25.00	1.50	25.00
R. H. Lamb, Washington, D. C.	2.40	25.00	2.15			
E. G. Gummel, Washington, D. C.	<sup>1</sup> 1.87	27.00	<sup>1</sup> 1.60	25.00	1.45	25.00

<sup>1</sup> Bid accepted.

*Proposals for furnishing sand, pebbles, and broken stones, opened September 22, 1894.*

[Price per cubic yard.]

Bidder.	At District sand yard.					At bidder's yard.				
	Concrete sand.	Paving sand.	Building sand.	Screened pebbles.	Broken stone.	Concrete sand.	Paving sand.	Building sand.	Screened pebbles.	Broken stone.
E. G. Gummel, Washington, D. C.					\$2.35					\$2.00
C. G. Smith & Sons, Washington, D. C.					1.45					1.35
Jas. T. Summers, Washington, D. C.	\$0.60	\$0.59	\$0.79	\$0.75 <sup>1</sup>		\$0.60	\$0.59	\$0.79	\$0.75 <sup>1</sup>	
Jno. B. Lord, Washington, D. C.	.57	.57	.79	.79		.57	.57	.79	.79	

<sup>1</sup> Bid for pebbles accepted; all others rejected.

*Proposals for constructing sewer in Rock Creek Valley, from near Woodley road to Piney Branch, opened December 27, 1894.*

Bidder.	Section A.		Section B.		Section C.		Section C.	
	For excavation for 2.75 by 4.125 foot sewer, above sewer subgrade (8,475 linear feet).		For excavation for bell section (317 cubic yards).		For brick masonry (brick arch, 2,320 cubic yards).		For brick masonry (concrete arch, 399 cubic yards).	
	Price.	Total.	Price.	Total.	Price.	Total.	Price.	Total.
B. J. Coyle, Washington, D. C.	\$3.20	\$27,120.00	\$4.50	\$1,426.50	\$11.80	\$27,482.20	\$11.80	\$4,708.20
Andrew Gleeson, Washington, D. C.	5.39	45,680.25	.62	196.54	11.32	26,364.28	11.32	4,516.68
E. G. Gummel, Washington, D. C.	2.30	19,492.50	2.10	665.70	10.68	24,873.72	10.68	4,261.32
Jas. McCandlish, Washington, D. C. <sup>1</sup>	1.87	15,848.25	.95	301.15	10.97	25,549.13	10.97	4,377.03
Lyons Bros., Washington, D. C.	1.60	13,560.00	1.50	475.50	12.40	28,879.60	12.40	4,947.60
Jas. F. Kennedy, Washington, D. C.	2.25	19,068.75	1.70	538.90	8.50	19,796.50	8.50	3,391.50
T. M. Leshner & Son, Easton, Pa.	2.78	23,560.50	4.00	1,268.00	11.73	27,319.17	11.73	4,680.27

Bidder.	Section D.		Section E.		Section F.		Section F.	
	For vitrified brick masonry (336 cubic yards).		For concrete masonry in place in arches (concrete arch 1,294 cubic yards).		For concrete masonry in place other than arches (brick arch 670 cubic yards).		For concrete masonry in place other than arches (concrete arch 1,306 cubic yards).	
	Price.	Total.	Price.	Total.	Price.	Total.	Price.	Total.
B. J. Coyle, Washington, D. C.	\$21.00	\$7,056.00	\$7.70	\$9,963.80	\$6.00	\$4,020.00	\$6.00	\$7,836.00
Andrew Gleeson, Washington, D. C.	20.40	6,854.40	6.25	8,087.50	6.00	4,020.00	6.00	7,836.00
E. G. Gummel, Washington, D. C.	19.13	6,427.68	9.00	11,646.00	8.05	5,393.50	8.05	10,513.80
Jas. McCandlish, Washington, D. C. <sup>1</sup>	17.94	6,027.84	6.48	8,385.12	5.87	3,932.90	5.87	7,666.22
Lyons Bros., Washington, D. C.	25.00	8,400.00	11.75	15,204.50	11.75	7,872.50	11.75	15,345.50
Jas. F. Kennedy, Washington, D. C.	14.00	4,704.00	5.74	7,427.56	3.00	2,010.00	3.00	3,918.00
T. M. Leshner & Son, Easton, Pa.	20.10	6,753.60	6.00	7,764.00	6.00	4,020.00	6.00	7,836.00

Bidder.	Section G.		Section H.		Section I.		Section K.		Total for brick sewer.	Total for concrete sewer.
	For vitrified block inverts (8,475 linear feet).		For furnishing and laying 30-inch cast-iron pipe (520 linear feet).		For all excavation made below sewer sub-grade (175 cubic yards).		For embankment over 2.75 by 4.125 foot sewer (1,630 cubic yards).			
	Price.	Total.	Price.	Total.	Price.	Total.	Price.	Total.		
B. J. Coyle, Washington, D. C.	\$0.75	\$6,356.25	\$11.40	\$5,928.00	\$0.80	\$140.00	\$0.45	\$733.50	\$80,262.45	\$71,268.25
Andrew Gleeson, Washington, D. C.	.65	5,508.75	11.90	6,188.00	.62	108.50	.50	815.00	95,735.72	85,791.62
E. G. Gummel, Washington, D. C.	.63	5,339.25	11.40	5,928.00	1.00	175.00	.50	815.00	69,110.35	65,263.75
Jas. McCandlish, Washington, D. C. <sup>1</sup>	.67	5,678.25	11.33	5,891.60	.60	105.00	1.00	1630.00	64,964.12	55,910.46
Lyons Bros., Washington, D. C.	.65	5,508.75	10.00	5,200.00	3.00	525.00	.45	733.50	71,154.85	69,900.35
Jas. F. Kennedy, Washington, D. C.	.52	4,407.00	4.85	2,522.00	3.50	612.50	.25	407.50	54,067.15	46,997.71
T. M. Leshner & Son, Easton, Pa.	.60	5,085.00	12.00	6,240.00	.90	157.50	.60	978.00	75,381.77	64,322.87

<sup>1</sup> Bid accepted.

*Proposals for constructing sewers, opened February 4, 1895.*

## SECTION 1.—Sixth street, between Georgia avenue and Anacostia River SE.

Bidder.	Pile foundation complete, including flooring, etc. (820 linear feet).		Masonry construction, if brick is used (820 linear feet).		Masonry construction, if concrete section is used (820 linear feet).	
	Price.	Cost.	Price.	Cost.	Price.	Cost.
J. Jacoby, Wilmington, Del. <sup>1</sup> .....	\$8.00	\$6,560.00	\$9.71	\$7,962.20	\$9.00	\$7,380.00
Sawders & Houston, Pittsburg, Pa.....	10.40	8,528.00	11.75	9,635.00	9.90	8,118.00
B. J. Coyle, Washington, D. C.....	14.60	11,972.00	11.40	9,348.00	.....	.....
Lyons Bros., Washington, D. C.....	15.00	12,300.00	13.00	10,660.00	.....	.....
Andrew Gleeson, Washington, D. C.....	20.49	16,801.80	12.68	10,397.60	9.91	8,126.20
H. L. Cranford, Washington, D. C.....	27.85	22,837.00	14.72	12,070.40	.....	.....
E. G. Gummel, Washington, D. C.....	31.00	25,420.00	14.60	11,972.00	12.50	10,250.00
M. F. Talty, Washington, D. C.....	31.00	25,420.00	13.60	11,152.00	12.10	9,922.00
T. M. Leshner & Son, Easton, Pa.....	18.91	15,506.20	11.72	9,610.40	9.37	7,683.40

Bidder.	Embankment over sewer (5,000 cubic yards).		Manholes (2).		Total for brick sewer complete.	Total for concrete sewer complete.
	Price.	Cost.	Price.	Cost.		
J. Jacoby, Wilmington, Del. <sup>1</sup> .....	\$0.65	\$3,250.00	\$20.00	\$40.00	\$17,812.20	\$17,230.00
Sawders & Houston, Pittsburg, Pa.....	0.60	3,000.00	17.50	35.90	21,198.00	19,681.00
B. J. Coyle, Washington, D. C.....	0.40	2,000.00	7.50	15.00	23,335.00	.....
Lyons Bros., Washington, D. C.....	0.40	2,000.00	10.00	20.00	24,980.00	.....
Andrew Gleeson, Washington, D. C.....	0.50	2,500.00	10.00	20.00	29,719.40	27,448.00
H. L. Cranford, Washington, D. C.....	0.62	3,100.00	10.00	20.00	38,027.40	.....
E. G. Gummel, Washington, D. C.....	0.60	3,000.00	20.00	40.00	40,422.00	38,710.00
M. F. Talty, Washington, D. C.....	0.60	3,000.00	30.00	60.00	39,632.00	38,402.00
T. M. Leshner & Son, Easton, Pa.....	0.50	2,500.00	15.00	30.00	27,646.60	25,719.60

<sup>1</sup> Bid accepted.

## SECTION 2.—Twelfth street, between N street and Anacostia River SE.

Bidder.	Pile foundation complete, including flooring, etc. (840 linear feet).		Masonry construction, if brick is used (840 linear feet).		Masonry construction, if concrete section is used (840 linear feet).	
	Price.	Cost.	Price.	Cost.	Price.	Cost.
J. Jacoby, Wilmington, Del. <sup>1</sup> .....	\$7.75	\$6,510.00	\$9.50	\$7,980.00	\$8.50	\$7,140.00
Sawders & Houston, Pittsburg, Pa.....	10.40	8,736.00	10.90	9,159.00	8.98	7,543.20
B. J. Coyle, Washington, D. C.....	14.50	12,180.00	10.20	8,668.00	.....	.....
Lyons Bros., Washington, D. C.....	13.00	10,920.00	11.51	9,668.40	.....	.....
Andrew Gleeson, Washington, D. C.....	20.49	17,211.60	10.55	8,882.00	7.98	6,703.20
H. L. Cranford, Washington, D. C.....	30.19	25,359.60	12.86	10,802.40	.....	.....
E. G. Gummel, Washington, D. C.....	19.50	16,380.00	10.40	8,736.00	9.10	7,644.00
M. F. Talty, Washington, D. C.....	19.00	15,960.00	9.80	8,232.00	8.40	7,056.00
T. M. Leshner & Son, Easton, Pa.....	18.75	15,750.00	10.89	9,147.60	8.75	7,350.00
Naylor & Brenizer, Washington, D. C.....	22.30	18,732.00	11.70	9,828.00	9.52	7,996.80

Bidder.	Embankment over sewer (6,000 cubic yards).		Manholes (2).		Total for brick masonry complete.	Total for concrete masonry complete.
	Price.	Cost.	Price.	Cost.		
J. Jacoby, Wilmington, Del. <sup>1</sup> .....	\$0.65	\$3,900.00	\$20.00	\$40.00	\$18,430.00	\$17,590.00
Sawders & Houston, Pittsburg, Pa.....	.55	3,300.00	22.50	45.00	21,237.00	19,624.20
B. J. Coyle, Washington, D. C.....	.40	2,400.00	7.50	15.00	23,163.00	.....
Lyons Bros., Washington, D. C.....	.40	2,400.00	10.00	20.00	23,008.40	.....
Andrew Gleeson, Washington, D. C.....	.50	3,000.00	10.00	20.00	29,093.60	26,934.80
H. L. Cranford, Washington, D. C.....	.52	3,120.00	10.00	20.00	39,302.00	.....
E. G. Gummel, Washington, D. C.....	.60	3,600.00	25.00	50.00	28,766.00	27,674.00
M. F. Talty, Washington, D. C.....	.60	3,600.00	25.00	50.00	27,842.00	26,666.00
T. M. Leshner & Son, Easton, Pa.....	.50	3,000.00	40.00	80.00	27,977.60	26,180.00
Naylor & Brenizer, Washington, D. C.....	.65	3,900.00	13.00	26.00	32,486.00	30,654.80

<sup>1</sup> Bid accepted.

*Proposals for constructing sewers, opened February 4, 1895—Continued.*

## SECTION 3.—Holmead avenue, between Spring road and Whitney avenue NW.

Bidder.	24-inch pipe (510 linear feet).		21-inch pipe (950 linear feet).		18-inch pipe (190 linear feet).		12-inch pipe (350 linear feet).		Manholes (7).		Total cost.
	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	
Hussey & Brown, Washington, D.C.	\$1.92	\$979.20	\$1.80	\$1,710.00	\$1.72	\$376.80	\$1.30	\$455.00	\$25.00	\$175.00	\$3,646.00
E. G. Gummel, Washington, D.C.	1.69	861.90	1.55	1,472.50	1.45	275.50	1.05	367.50	29.00	203.00	3,180.40
Thomas Buckley, Washington, D.C.	2.19	1,116.90	1.87	1,776.50	1.75	332.50	1.13	395.50	25.00	175.00	3,796.40
Lyons Bros., Wash- ington, D.C.	1.76	897.60	1.73	1,643.50	1.66	315.40	1.23	430.50	35.00	245.00	3,532.00
M. F. Talty, Wash- ington, D.C.	1.74	887.40	1.60	1,520.00	1.52	288.80	1.10	385.00	30.00	210.00	3,291.20
J. Jacoby, Wilming- ton, Del.	1.78	907.80	1.60	1,520.00	1.40	266.00	.90	315.00	50.00	350.00	3,358.80
Sawders & Hous- ton, Pittsburg, Pa.	1.05	535.50	1.14	1,083.00	1.22	231.80	.98	343.00	38.00	266.00	2,459.30
Geo. S. Good & Co., Lock Haven, Pa.	1.79	912.90	1.69	1,605.50	1.59	302.10	.99	346.50	20.00	140.00	3,307.00
Naylor & Brenizer, Washington, D.C.	1.74	887.40	1.64	1,558.00	1.66	315.40	1.17	409.50	29.00	203.00	3,373.30
J. McCandlish, Washington, D.C.	1.83	933.30	1.73	1,643.50	1.63	309.70	1.03	360.50	27.00	189.00	3,436.00
Cudmore & Fraw- ley, Washington, D.C.	1.69	861.90	1.59	1,510.50	1.49	283.10	.99	346.50	23.00	161.00	3,163.00
J. P. Larguey, Wash- ington, D.C.	2.00	1,020.00	2.00	1,900.00	1.75	332.50	1.10	385.00	27.00	189.00	3,826.50
Bolden & Wormley, Washington, D.C. <sup>1</sup>	1.58½	809.62	1.52½	1,451.12	1.35½	257.92	1.13½	398.12	24.98½	174.91	3,091.69
T. M. Lesher & Son, Easton, Pa.	2.39	1,218.90	2.24	2,118.00	2.01	381.90	1.66	581.00	50.00	350.00	4,659.80

<sup>1</sup> Bid accepted.

## SECTION 4.—Fourteenth street extended, between Florida avenue and Roanoke street.

Bidder.	24-inch pipe (1,320 linear feet).		Manholes-(4).		Total cost.
	Price.	Cost.	Price.	Cost.	
Hussey & Brown, Washington, D.C.	\$2.30	\$3,036.00	\$25.00	\$100.00	\$3,136.00
E. G. Gummel, Washington, D.C.	1.96	2,587.20	28.00	112.00	2,699.20
Thomas Buckley, Washington, D.C.	2.00	2,640.00	21.00	84.00	2,724.00
Lyons Bros., Washington, D.C.	1.73	2,283.60	30.00	120.00	2,403.60
M. F. Talty, Washington, D.C.	2.25	2,970.00	30.00	120.00	3,090.00
J. Jacoby, Wilmington, Del.	1.90	2,508.00	45.00	180.00	2,688.00
Sawders & Houston, Pittsburg, Pa.	1.07	1,412.40	36.00	144.00	1,556.40
Geo. S. Good & Co., Lock Haven, Pa. <sup>1</sup>	1.70	2,244.00	18.00	72.00	2,316.00
Naylor & Brenizer, Washington, D.C.	1.72	2,270.40	25.00	100.00	2,370.40
Cudmore & Frawley, Washington, D.C.	1.69	2,230.80	22.50	90.00	2,320.80
Bolden & Wormley, Washington, D.C.	1.69½	2,240.70	26.97½	107.91	2,348.61
J. P. Larguey, Washington, D.C.	1.95	2,574.00	25.00	100.00	2,674.00
T. M. Lesher & Son, Easton, Pa.	2.39	3,154.80	50.00	200.00	3,354.80

<sup>1</sup> Bid accepted.



*Proposals for constructing sewers, opened February 4, 1895—Continued.*

## SECTION 5.—Eleventh street, between New York avenue and M street NW.

Bidder.	24-inch pipe (1,030 linear feet).		21-inch pipe (140 linear feet).		15-inch pipe (650 linear feet).		12-inch pipe (50 linear feet).		Manholes (13).		Total cost.
	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	
Hussey & Brown, Washington, D. C.	\$2.50	\$2,575.00	\$2.30	\$322.00	\$2.00	\$1,300.00	\$1.75	\$87.50	\$25.00	\$325.00	\$4,609.50
E. G. Gummel, Wash- ington, D. C.	2.07	2,132.10	1.82	254.80	1.56	1,014.00	1.37	68.50	30.00	390.00	3,859.40
Thomas Buckley, Washington, D. C.	2.13	2,193.90	1.87	261.80	1.70	1,105.00	1.10	55.00	22.00	286.00	3,901.70
Lyons Bros., Wash- ington, D. C.	2.65	2,729.50	1.95	273.00	1.75	1,137.50	1.16	58.00	35.00	455.00	4,653.00
M. F. Talty, Wash- ington, D. C.	2.15	2,214.50	1.80	252.00	1.55	1,007.50	1.20	60.00	30.00	390.00	3,924.00
J. Jacoby, Wilming- ton, Del.	2.60	2,628.00	2.25	315.00	1.75	1,137.50	1.50	75.00	45.00	585.00	4,790.50
Sawders & Houston, Pittsburg, Pa.	1.42	1,462.60	1.24	173.60	1.24	806.00	1.14	57.00	37.00	481.00	2,980.20
Naylor & Brenizer, Washington, D. C.	2.18	2,245.40	1.92	268.80	1.56	1,014.00	1.31	65.50	29.00	377.00	3,970.70
Cudmore & Frawley, Washington, D. C.	2.10	2,163.00	-----	( <sup>1</sup> )	-----	-----	-----	-----	-----	-----	-----
Bolden & Wormley, Washington, D. C.	2.35 <sup>1</sup>	2,428.22	2.25 <sup>1</sup>	316.05	2.20	1,430.00	2.00	100.00	23.95	311.35	4,585.62
J. P. Larguey, Wash- ington, D. C.	2.15	2,214.50	1.85	259.00	1.45	942.50	1.20	60.00	27.00	351.00	3,827.00
T. M. Leshar & Son, Easton, Pa.	2.39	2,461.70	2.24	313.60	1.95	1,267.50	1.66	83.00	50.00	650.00	4,775.80

<sup>1</sup> Bid accepted.<sup>2</sup> Informal

## SECTION 6.—Massachusetts avenue, between Ninth and Eleventh streets NE.

Bidder.	21-inch pipe (360 linear feet).		18-inch pipe (300 linear feet).		12-inch pipe (170 linear feet).		Manholes (3).		Total cost.
	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	
E. G. Gummel, Washington, D. C.	\$1.81	\$651.60	\$1.69	\$507.00	\$1.28	\$217.60	\$30.00	\$90.00	\$1,466.20
Hussey & Brown, Washing- ton, D. C.	2.30	828.00	2.10	630.00	1.75	297.50	25.00	75.00	1,830.50
Thomas Buckley, Washing- ton, D. C.	1.89	680.40	1.79	537.00	1.19	202.30	23.00	69.00	1,488.70
Lyons Bros., Washington, D. C.	1.98	712.80	1.95	585.00	1.20	204.00	30.00	90.00	1,591.80
M. F. Talty, Washington, D. C.	1.94	698.40	1.73	519.00	1.30	221.00	30.00	90.00	1,528.40
J. Jacoby, Wilmington, Del.	2.50	900.00	2.00	600.00	1.50	255.00	50.00	150.00	1,905.00
Sawders & Houston, Pitts- burg, Pa.	1.40	504.00	1.32	396.00	1.27	215.90	36.00	108.00	1,223.90
Naylor & Brenizer, Washing- ton, D. C.	1.97	709.20	1.57	471.00	1.33	226.10	30.00	90.00	1,496.30
Bolden & Wormley, Wash- ington, D. C.	1.95	702.00	1.85	555.00	1.75	297.50	25.00	75.00	1,629.50
J. P. Larguey, Washington, D. C.	1.90	684.00	1.60	480.00	1.20	204.00	27.00	81.00	1,449.00
T. M. Leshar & Son, Easton, Pa.	2.24	806.40	2.01	603.00	1.66	282.20	50.00	150.00	1,841.60

<sup>1</sup> Bid accepted.

# 220 ENGINEER DEPARTMENT, DISTRICT OF COLUMBIA.

*Proposals for constructing sewers, opened February 4, 1895—Continued.*

SECTION 7.—Maryland avenue, between Third and Four-and-a-half streets SW.

Bidder.	24-inch pipe (760 linear feet).		Manholes (3).		Total cost.
	Price.	Cost.	Price.	Cost.	
Hussey & Brown, Washington, D. C.....	\$2.30	\$1,748.00	\$25.00	\$75.00	\$1,823.00
E. G. Gummel, Washington, D. C.....	1.98	1,504.80	27.00	81.00	1,585.80
Thomas Buckley, Washington, D. C. <sup>1</sup> .....	1.85	1,406.00	18.00	54.00	1,460.00
Lyons Bros., Washington, D. C.....	2.10	1,596.00	35.00	105.00	1,701.00
M. F. Talty, Washington, D. C.....	2.20	1,672.00	30.00	90.00	1,762.00
J. Jacoby, Wilmington, Del.....	2.60	1,976.00	40.00	120.00	2,096.00
Sawders & Houston, Pittsburg, Pa.....	1.11	843.60	34.00	102.00	945.60
Naylor & Brenizer, Washington, D. C.....	2.20	1,672.00	25.00	75.00	1,747.00
Cudmore & Frawley, Washington, D. C.....	1.79	1,360.40	25.00	75.00	1,435.40
Bolden & Wormley, Washington, D. C.....	2.25	1,710.00	23.95	71.85	1,781.85
J. P. Larguey, Washington, D. C.....	2.00	1,520.00	24.00	72.00	1,592.00
T. M. Leasher & Son, Easton, Pa.....	2.29	1,740.40	50.00	150.00	1,890.40

<sup>1</sup> Bid accepted.

SECTION 8.—M street, between Water and Sixth streets SW.

Bidder.	24-inch pipe (35 linear feet).		21-inch pipe (250 linear feet).		18-inch pipe (190 linear feet).		Manholes (5).		Total cost.
	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	
Hussey & Brown, Washington, D. C.....	\$2.25	\$78.75	\$2.20	\$550.00	\$2.00	\$380.00	\$25.00	\$125.00	\$1,133.75
E. G. Gummel, Washington, D. C.....	1.78	62.30	1.53	382.50	1.44	273.60	27.00	135.00	853.40
Thomas Buckley, Washington, D. C.....	1.89	66.15	1.65	412.50	1.55	294.50	17.00	85.00	858.15
M. F. Talty, Washington, D. C.....	1.90	66.50	1.80	400.00	1.40	268.00	30.00	150.00	882.50
J. Jacoby, Wilmington, Del.....	3.00	105.00	2.50	625.00	2.00	380.00	45.00	225.00	1,335.00
Sawders & Houston, Pittsburg, Pa.....	1.65	57.75	1.58	395.00	1.45	275.50	29.00	145.00	873.25
Naylor & Brenizer, Washington, D. C. <sup>1</sup> .....	1.71	59.85	1.56	390.00	1.23	233.70	25.00	125.00	808.55
Bolden & Wormley, Washington, D. C.....	1.59½	55.91	1.56½	391.87	1.39½	265.52	24.98½	124.94	838.24
J. P. Larguey, Washington, D. C.....	2.00	70.00	1.80	450.00	1.60	304.00	24.00	120.00	944.00
T. M. Leasher and Son, Easton, Pa.....	2.39	83.65	2.20	550.00	2.00	380.00	50.00	250.00	1,263.65

<sup>1</sup> Bid accepted.

*Proposals for constructing sewers, opened June 30, 1895.*

SECTION A.—Linden street NW., between Wilson and Pomeroy streets.

Bidder.	2.25 by 3.375 foot egg-shaped brick sewer (350 linear feet).		Two man-holes (each).	Total for brick sewer.	2.25 by 3.375 foot egg-shaped concrete sewer (350 linear feet).		Two man-holes (each).	Total for concrete sewer.
	Price.	Total.			Price.	Total.		
John Jacoby, Wilmington, Del.....	\$4.70	\$1,645.00	\$45.00	\$1,735.00				
Bolden & Wormley, Washington, D. C.....	5.98	2,093.00	24.98	2,142.96	\$3.95	\$1,382.50	\$24.98	\$1,432.46
Lyons Bros., Washington, D. C.....	4.90	1,715.00	30.00	1,775.00	4.49	1,571.50	30.00	1,631.50
J. P. Larguey, Washington, D. C.....	5.45	1,907.00	26.00	1,959.00	5.15	1,802.50	26.00	1,854.50
Thos. Buckley, Washington, D. C.....	5.60	1,960.00	22.00	2,004.00	5.10	1,785.00	22.00	1,829.00
Lamb & Darby, Washington, D. C.....	5.50	1,925.00	27.00	1,979.00	5.15	1,802.50	27.00	1,856.00
E. G. Gummel, Washington, D. C.....	5.82	2,037.00	38.00	2,113.00	5.24	1,834.00	38.00	1,910.00

<sup>1</sup> Bid accepted.

*Proposals for constructing sewers, opened June 30, 1895—Continued.*

## SECTION B.—Twelfth street NW., between Massachusetts avenue and M street.

Bidder.	24-inch pipe sewer (570 linear feet).		Four man- holes (each).	Total for pipe sewer.
	Price.	Total.		
Lyons Bros., Washington, D. C. <sup>1</sup> .....	\$1.95	\$1,111.50	\$30.00	\$1,231.50
Thos. Buckley, Washington, D. C. ....	2.07	1,179.90	23.00	1,271.90
E. G. Gummel, Washington, D. C. ....	2.16	1,231.20	28.00	1,343.20
Jno. Jacoby, Wilmington, Del. ....	2.20	1,254.00	40.00	1,414.00
J. P. Larguey, Washington, D. C. ....	2.25	1,282.50	28.00	1,394.50
Lamb & Darby, Washington, D. C. ....	2.40	1,368.00	25.00	1,468.00
Bolden & Wormley, Washington, D. C. ....	2.50	1,425.00	26.00	1,529.00

<sup>1</sup> Bid accepted.

## SECTION C.—North Capitol street, between O and P streets.

Bidder.	21-inch pipe sewer (595 linear feet).		18-inch pipe sewer (225 linear feet).		Six man- holes (each).	Total cost pipe sewer.
	Price.	Total.	Price.	Total.		
Thos. Buckley, Washington, D. C. <sup>1</sup> .....	\$1.87	\$1,112.65	\$1.75	\$393.75	\$21.00	\$1,632.40
Lyons Bros., Washington, D. C. ....	1.85	1,100.75	1.78	400.50	30.00	1,631.25
John Jacoby, Wilmington, Del. ....	1.90	1,130.50	1.60	360.00	35.00	1,700.50
E. G. Gummel, Washington, D. C. ....	1.98	1,178.10	1.78	400.50	27.00	1,740.60
Lamb & Darby, Washington, D. C. ....	2.10	1,249.50	1.80	405.00	25.00	1,804.50
Bolden & Wormley, Washington, D. C. ....	2.34½	1,396.76	2.24½	505.69	24.97½	2,052.31

<sup>1</sup> Bid accepted.

## SECTION D.—North Capitol street, between O and P streets.

Bidder.	12-inch pipe sewer (330 linear feet).		Three man- holes (each).	Total.
	Price.	Total.		
Thos. Buckley, Washington, D. C. <sup>1</sup> .....	\$0.95	\$313.50	\$17.00	\$364.50
Lamb & Darby, Washington, D. C. ....	1.25	412.50	25.00	487.50
John Jacoby, Wilmington, Del. ....	1.25	412.50	35.00	517.50
E. G. Gummel, Washington, D. C. ....	1.38	455.40	25.00	530.40
Lyons Bros., Washington, D. C. ....	1.58	521.40	30.00	611.40
Bolden & Wormley, Washington, D. C. ....	2.50	825.00	25.00	900.00

<sup>1</sup> Bid accepted.

## SECTION E.

Bidder.	I street SW., between Third and Four-and-a-half streets.				I street SW., crossing Four-and-a-half street.				Total for pipe sewer.
	24-inch pipe sewer (310 linear feet).		21-inch pipe sewer (310 linear feet).		18-inch pipe sewer (50 linear feet).		Five man-holes (each).		
	Price.	Total.	Price.	Total.	Price.	Total.			
Thos. Buckley, Washington, D. C. <sup>1</sup>	\$1.95	\$604.50	\$1.80	\$558.00	\$1.65	\$82.50	\$19.00	\$1,340.00	
E. G. Gummel, Washington, D. C. ....	1.95	604.50	1.84	570.40	1.60	80.00	27.00	1,389.90	
Lyon Bros., Washington, D. C. ....	1.93	598.30	1.89	585.90	1.95	97.50	30.00	1,431.70	
Jno. Jacoby, Wilmington, Del. ....	2.20	682.00	1.75	542.50	1.70	85.00	35.00	1,484.50	
Lamb & Darby, Washington, D. C. ....	2.35	728.50	1.95	604.50	2.00	100.00	25.00	1,558.00	
Bolden & Wormley, Washington, D. C. ....	2.49½	774.22	2.48½	771.12	2.45½	122.87	24.95	1,792.97	

<sup>1</sup> Bid accepted.

# 222      ENGINEER DEPARTMENT, DISTRICT OF COLUMBIA.

*Proposals for constructing sewers, opened June 30, 1895—Continued.*

SECTION F.—H street SW., between Four-and-a-half and Sixth streets.

Bidder.	15-inch pipe sewer (170 lin- ear feet).		12-inch pipe sewer (295 lin- ear feet).		10-inch pipe sewer (90 lin- ear feet).		Four man- holes (each).	Total for pipe sewer.
	Price.	Total.	Price.	Total.	Price.	Total.		
Thos. Buckley, Washington, D. C. <sup>1</sup>	\$1. 21	\$205. 70	\$1. 00	\$295. 00	\$0. 85	\$76. 50	\$18. 00	\$649. 20
Lyon Bros., Washington, D. C. ....	1. 40	238. 00	1. 20	354. 00	1. 20	108. 00	30. 00	820. 00
E. G. Gummel, Washington, D. C. ....	1. 57	266. 90	1. 26	371. 70	1. 10	99. 00	26. 00	841. 00
Lamb & Darby, Washington, D. C. ....	1. 55	263. 50	1. 25	368. 75	1. 25	112. 50	25. 00	844. 75
Jno. Jacoby, Wilmington, Del. ....	1. 50	255. 00	1. 40	413. 10	1. 25	112. 50	35. 00	920. 50
Bolden & Wormley, Washington, D. C. ....	2. 43½	414. 37	2. 43½	719. 06	2. 43½	219. 37	24. 95	1, 452. 60

<sup>1</sup> Bid accepted.

SECTION G.—Virginia avenue, between Twenty-first and Twenty-second streets.

Bidder.	21-inch pipe (400 linear feet).		18-inch pipe (350 linear feet).		Five man- holes (each).	Total for pipe sewer.
	Price.	Total.	Price.	Total.		
Lyons Bros., Washington, D. C. <sup>1</sup> .....	\$1. 78	\$712. 00	\$1. 57	\$549. 50	\$30. 00	\$1, 411. 50
John Jacoby, Wilmington, Del. ....	1. 75	700. 00	1. 50	525. 00	40. 00	1, 425. 00
Thomas Buckley, Washington, D. C. ....	1. 85	740. 00	1. 75	612. 50	20. 00	1, 452. 50
J. P. Larguey, Washington, D. C. ....	1. 85	740. 00	1. 75	612. 50	27. 00	1, 487. 50
E. G. Gummel, Washington, D. C. ....	1. 89	756. 00	1. 75	612. 50	28. 00	1, 508. 50
Lamb & Darby, Washington, D. C. ....	2. 18	872. 00	1. 80	630. 00	25. 00	1, 627. 00
Bolden & Wormley, Washington, D. C. ....	2. 55	1, 020. 00	2. 50	875. 00	26. 00	2, 065. 00

<sup>1</sup> Bid accepted.

*Proposals for furnishing fifty street hydrants, opened November 17, 1894.*

Bidder.	Price each.	Remarks.
M. J. Drummond, New York City .....	\$12. 50	
A. H. Haig, Philadelphia, Pa. ....	14. 68	
Raymond & Campbell Manufacturing Co., Middletown, Pa. ....	16. 27	
Zebulon E. Coffin, Boston, Mass. ....	14. 00	
Ludlow Valve Manufacturing Co., Troy, N. Y. ....	12. 00	Bid accepted.

*Proposals for furnishing 200 fire hydrants, opened November 17, 1894.*

Bidder.	Price (each).	Remarks.
M. J. Drummond, New York City .....	\$30. 60	
Do .....	41. 00	With auxiliary valves.
Do .....	35. 00	Without auxiliary valves.
A. H. Haig, Philadelphia, Pa. ....	36. 39	Bid accepted.
Do .....	41. 00	With auxiliary valves.
Do .....	31. 90	Without auxiliary valves.
Raymond & Campbell Manufacturing Co., Middletown, Pa. ....	39. 77	
Zebulon E. Coffin, Boston, Mass. ....	33. 00	
Camden Iron Works, Camden, N. J. ....	40. 50	
Jenkins & Lingle, Bellefonte, Pa. ....	52. 50	

*Proposals for furnishing water valves, opened July 28, 1894.*

Bidder.	25 3-inch valves (each).	50 4-inch valves (each).	200 6-inch valves (each).	10 12-inch valves (each).	Remarks.
M. J. Drummond, New York City.....	\$6.00	\$7.50	\$11.50	\$25.90	Bid accepted.
Burritt Manufacturing Co., Boundbrook, N. J.	4.50	5.60	9.40	27.00	
Rensselaer Manufacturing Co., Troy, N. Y.	5.15	6.20	9.90	28.00	
Mohawk and Hudson Manufacturing Co., {	5.00	6.00	9.00	25.50	
Troy, N. Y. }	5.45	6.50	10.15	28.50	
Kennedy Valve Manufacturing Co., New York City.	4.05	5.40	7.70	24.30	
Ludlow Valve Manufacturing Co., Philadelphia, Pa.	5.00	5.90	9.70	26.50	

*Proposals for furnishing cast-iron water pipes, opened August 11, 1894.*

[Price per ton of 2,240 pounds.]

Bidder.	10,000 feet 4-inch pipe (80.3 tons).	50,000 feet 6-inch pipe (675.22 tons).	5,000 feet 12-inch pipe (167.41 tons).	Remarks.
Radford Pipe and Foundry Co., Radford, Va...	\$ 0.48	\$20.48	\$20.48	Bid accepted.
McNeal Pipe and Foundry Co., Burlington, N. J.	21.75	21.75	21.75	
Anniston Pipe and Foundry Co., Anniston, Ala.	21.30	21.30	21.30	
F. B. Hawkins & Co., New York City.....	23.25	23.25	22.25	
M. J. Drummond, New York City.....	20.50	20.15	19.95	

*Proposals for iron bridge girders and beams, opened August 11, 1894.*

Bidder.	Price per pound.	Remarks.
	<i>Cents.</i>	
Shiffler Bridge Co., Pittsburg, Pa.....	2.18	Bid accepted.
Youngstown Bridge Co., Youngstown, Ohio.....	2.39	
King Bridge Co., Cleveland, Ohio.....	2.57	
Edwin N. Gray, Washington, D. C.....	2.49	
R. H. Hood, Washington, D. C.....	2.25	

*Proposals for furnishing cast-iron water pipe, opened December 17, 1894.*

[Price per ton of 2,240 pounds.]

Bidder.	18-inch pipe (8 tons).		20-inch pipe (12 tons).		24-inch pipe (801 tons).		30-inch pipe (3½ tons).		Total cost.
	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	
The McNeal Pipe and Foundry Co., Burlington, N. J.:									
By vessel.....	\$20.00	\$160.00	\$20.00	\$240.00	\$20.00	\$16,020.00	\$20.00	\$70.00	\$16,490.00
By cars.....	21.30	170.40	21.30	255.60	21.30	17,061.30	21.30	74.55	17,561.85
Camden Iron Works, Camden, N. J.....	22.60	180.80	22.60	271.20	22.60	18,102.60	22.60	79.10	18,633.70

<sup>1</sup> Bid accepted.*Proposals for furnishing cast-iron water pipe, opened March 4, 1895.*

[Price per ton of 2,240 pounds.]

Bidder.	6-inch pipe (222½ tons).	
	Price.	Cost.
M. J. Drummond, New York City <sup>1</sup> .....	\$19.15	\$4,262.60
Anniston Pipe and Foundry Co., Anniston, Ala.....	20.09	4,476.53

<sup>1</sup> Bid accepted.

*Proposals for laying cement sidewalks, opened June 14, 1895.*

Bidder.	Laying cement sidewalks (per square yard).
H. L. Cranford, Washington, D. C. <sup>1</sup> .....	\$1.33
Smedley Paving Co., Philadelphia, Pa. ....	1.60
Geo. Drew & Son, Washington, D. C. ....	1.35

<sup>1</sup> Bid accepted.*Proposals for paving sidewalks under permit system, opened July 20, 1894.*

Bidder.	Price per square yard.
H. L. Cranford, Washington, D. C. <sup>1</sup> .....	\$1.44
Geo. Killeen, Washington, D. C. ....	1.45
T. J. Johnson, Washington, D. C. ....	1.45½
Columbia Concrete Construction Co., Washington, D. C. ....	1.50
Geo. Drew & Son, Washington, D. C. ....	1.57

<sup>1</sup> Bid accepted.*Proposals for laying brick, asphalt tile, asphalt block, and vitrified brick and block sidewalks, opened November 13, 1894.*

[Price per square yard.]

Bidder.	Brick.	As-phalt tile.	As-phalt block.	Vitrified brick.	Vitri-fied block.	Deduction to be allowed if old base is not disturbed.
M. F. Talty, Washington, D. C. ....	\$0.40	\$0.49	\$0.53	\$0.60	\$0.60	16 cents per square yard.
Washington Asphalt Block and Tile Co., Washington, D. C. ....	.45	.55	.55	.60	.60	20 cents per square yard.
M. F. O'Brien and Thomas Ragan, Washington, D. C. {	.34	.39	.44	{On edge, .55 Flat, .46	.45	

NOTE.—All block and brick to be furnished on line of work. All bids rejected.

*Proposal for furnishing asphalt blocks and tiles, opened August 20, 1894.*

[Price per M.]

Bidder.	Blocks.	Tiles.
The Washington Asphalt Block and Tile Co., Washington, D. C. <sup>1</sup> .....	\$63.00	\$52.50

<sup>1</sup> Bid accepted.*Proposals for vitrified bricks for sewer inverts, opened August 20, 1894.*

Bidder.	Price per M.
Minerva Paving Brick Co., Minerva, Ohio.....	\$15.45
Jno. M. Mack, Philadelphia, Pa. ....	15.00
Savage Fire Brick Co., Keystone Junction, Pa. <sup>1</sup> .....	16.50
McMahan, Porter & Co., New Cumberland, W. Va. ....	16.40
Do .....	<sup>2</sup> 17.40
Jno. Robrecht, Wheeling, W. Va. ....	15.50
Furnace Fire Clay Co., Salineville, Ohio. ....	<sup>3</sup> 18.00
Frederick Brick Works, Frederick, Md. ....	12.00

<sup>1</sup> Bid accepted.<sup>2</sup> Re-pressed.<sup>3</sup> Or \$17.25 for wire-cut.



*Proposals for furnishing paving bricks or blocks, opened August 20, 1894.*

Bidder.	Ordinary vitrified paving bricks.		Re-pressed vitrified paving bricks.		Ordinary vitrified paving blocks.		Re-pressed vitrified paving blocks.	
	Number.	Per M.	Number.	Per M.	Number.	Per M.	Number.	Per M.
Minerva Paving Brick Co., Minerva Ohio.....	5,000,000	\$15.45						
Shale Brick Exchange, Canton, Ohio.....	1,500,000	16.72	1,500,000	\$17.12	1,500,000	\$23.72	1,300,000	\$23.72
Brady's Run Fire Clay Co., Bridgewater, Pa.	2,000,000	18.00						
Savage Fire Brick Co., Keystone Junction, Pa.	2,000,000	G 15.50 C 16.25 ABDE 16.90						
Harris Bros. & Lane, Zanesville, Ohio.....	2,000,000	21.77						
McMahon, Porter & Co., New Cumberland, W. Va.....	2,000,000	15.90	2,000,000	A 16.54				
Do.....			2,000,000	Bor C 18.00				
Virginia Paving and Construction Co., Lynchburg, Va.....					1,400,000	17.00	1,400,000	16.00
Jno. M. Mack, Philadelphia, Pa.....	( <sup>3</sup> )	14.75	( <sup>3</sup> )	15.90			( <sup>2 3</sup> )	22.80
Jno. M. Mack (Shale).....	( <sup>3</sup> )	14.75	( <sup>3</sup> )	15.90			( <sup>3</sup> )	22.50
J. A. Haydon, Frederick, Md.....	1,500,000	16.50	1,500,000	17.75				
Furnace Fire Clay Co., Salineville, Ohio.....	250,000	17.00	1,750,000	18.00				
Jno. Robrecht, Wheeling, W. Va.....	2,500,000	15.25 15.50						
W. A. Park, Beaver County, Pa., Park Quarries.....		18.50		18.50				

<sup>1</sup> Or more.<sup>2</sup> Bid accepted.<sup>3</sup> As many as required.*Proposals for furnishing paving bricks for sidewalks, opened August 20, 1894.*

[Price per M.]

Where delivered.	Chas. Ford, Washington, D. C.	Washington Brick and Terra Cotta Co., Washington, D. C.	Frederick Brick Works, Frederick, Md.	Virginia Paving and Construction Co., Lynchburg, Va.
City and county of Washington, upon or south of Florida avenue and Benning's road and between Eastern Branch and Rock Creek.....	\$9.50	\$8.50		
In city of Georgetown.....	10.00	9.00		
In county of Washington, east of Eastern Branch.....	10.00	9.00		
In county of Washington, between Eastern Branch and Rock Creek, not over 1½ miles from Florida avenue.....	11.00	9.50		
In county of Washington, west of Rock Creek, within 1 mile of Georgetown.....	11.50	10.00		
At bidder's works in city and county of Washington.....	8.00	7.50		
At District of Columbia property yards.....	9.00	8.50	\$9.50	\$18.50

<sup>1</sup> Bid accepted.

*Proposals for furnishing sewer bricks, opened September 22, 1894.*

[Per 1,000.]

	Frederick Brick Works, Frederick, Md.	Washing- ton Brick and Terra Cotta Co., Washing- ton, D. C. <sup>1</sup>	Washing- ton Hy- draulic Press Brick Co., Wash- ington, D. C.	Childs Brick Com- pany, Washing- ton, D. C.
South of Florida avenue and Bennings road and between Eastern Branch and Rock Creek.....			\$9.00	\$6.90
In city of Georgetown.....			9.00	7.90
East of Eastern Branch.....			9.00	7.90
County of Washington between Eastern Branch and Rock Creek, not over 1½ miles from Florida avenue.....			9.00	7.70
County of Washington west of Rock Creek, within 1 mile of Georgetown.....			9.00	8.90
At bidder's works, city or county of Washington....		\$6.00	9.00	6.70
At District property yards, city of Washington....	\$9.00		9.00	6.90
Beyond limits above mentioned, each additional mile.....			1.00	1.00

<sup>1</sup> Bid accepted.*Proposals for furnishing paving bricks and blocks, opened May 15, 1895.*

## PAVING BRICKS FOR SIDEWALKS.

	The Fred- erick Brick Works, Frederick, Md. <sup>1</sup>	Washing- ton Brick and Terra Cotta Co., Washing- ton, D. C.	Charles Ford, Washing- ton, D. C.
Quantity.....	1,200,000	1,000,000	500,000
Delivery per month.....	100,000	100,000	60,000
Average number to square yard.....		Per sample.	36
Prices to apply to smaller order not less than.....		100,000	333,000
In city and county of Washington, upon or south of Florida avenue and Bennings road, and between Eastern Branch and Rock Creek.....			\$8.00
In city of Georgetown.....			\$8.70
In county of Washington east of Eastern Branch.....			\$8.75
In county of Washington between Eastern Branch and Rock Creek and not over 2 miles from Florida avenue.....			8.75
In county of Washington west of Rock Creek, within 1 mile of Georgetown.....			9.25
At bidder's works in city or county of Washington.....		\$7.50	9.50
At District of Columbia property yards in city of Washington....	\$9.50	7.90	7.00
			8.00

<sup>1</sup> Bid accepted.<sup>2</sup> In writing.<sup>3</sup> In figures.

*Proposals for furnishing paving bricks and blocks, opened May 5, 1895—Continued.*

## VITRIFIED PAVING BLOCKS.

Bidder.	Quantity re-pressed.	Average to yard on edge.	Price per M.	Deliveries to commence.	To be prosecuted at rate of, per month.
McMahan, Porter & Co., New Cumberland, W. Va.	{ 1,000,000 300,000	58 43	\$17.00 23.00	At once..... Aug. 1, 1895.	300,000 100,000
John Robrecht, Wheeling, W. Va. (as per specifications).	.....	47	22.45	20 days after notice.	As fast as wanted.
Virginia Paving and Construction Co., Lynchburg, Va.	800,000	58	17.25	July 15, 1895	50,000
Francis & Rauch, Pinegrove, Pa.	1,000,000	60	16.45	At once, round cornered; July 1, 1895, square edged.	50,000 to 100,000.
John M. Mack, Philadelphia, Pa.	Entire order.	43	21.65	When ordered.	300,000 or more.
Clearfield Clay Working Co., Limited, Clearfield, Pa.	100,000 to 200,000 per month.	58	16.00	July 1, 1895.	.....
Harris Bros. & Lane, Zanesville, Ohio.	Quantity required.	44	21.50	When ordered.	400,000

Bidder.	To be completed.	Apply to smaller number not less than—	Price per square yard.	Remarks.
McMahan, Porter & Co., New Cumberland, W. Va.	{ Time specified. .....do.....	100,000 100,000	\$.986 .989	Size, 9½ by 3½ by 4 inches.
John Robrecht, Wheeling, W. Va. (as per specifications).	.....	.....	1.055	.....
Virginia Paving and Construction Co., Lynchburg, Va.	July 1, 1896.	200,000	1.0005	In District of Columbia property yard.
Francis & Rauch, Pinegrove, Pa.	Dec. 31, 1895, or July 1, 1896.	.....	.987	.....
Jno. M. Mack, Philadelphia, Pa.	Nov. 1, 1895	.....	.93095	Bid accepted.
Clearfield Clay Working Co., limited, Clearfield, Pa.	June 30, 1896	.....	.928	Bid informal; no deposit.
Harris Bros. & Lane, Zanesville, Ohio.	July 1, 1896.	1,000,000	.946	Furnish 2,400,000 of Harris' pavement. Bid accepted for 50,000.

*Proposals for furnishing bluestone trap frames and covers, opened March 14, 1895.*

Bidder.	28 side traps (each).	10 corner traps (each).	Remarks.
Lane & Malnati, Washington, D. C.	\$17.00	\$19.00	Commence in 3 and complete in 60 days.
J. F. Manning, Washington, D. C.	19.00	25.00	Commence in 10 and complete in 20 days.
Acker & Co., Washington, D. C.	18.95	20.75	Commence in 30 and complete in 30 days.
John Burns, Washington, D. C.	16.50	18.00	Bid accepted. Commence in 15 days and complete when wanted.

*Proposals for furnishing granite block and trap-rock block, opened April 25, 1895.*

Bidder.	Granite block.	Trap-rock block.	Remarks.
Edmund Saxton, Washington, D. C.	Per M. \$12.50	Per M. \$5.00	Bid rejected.

*Proposals for granite curbing, opened August 20, 1894.*

Bidder.	8 by 8 straight granite curbing (per foot).	8 by 8 circular granite curbing (per foot).	6 by 20 straight granite curbing (per foot).	6 by 20 circular granite curbing (per foot).	Remarks.
John F. Manning, Washing- ton, D. C.	\$0.81	\$1.11	\$0.98½	\$1.42	
Acker & Co., Washington, D. C.	.83½	1.15	.98	1.33	
A. B. Cook, Petersburg, Va.	.79	1.10	.94	1.38	
John Burns, Washington, D. C.	.84	1.12½	.99	1.38	
McCanless Bros., Salisbury, N. C.	.80	1.00	.90	1.25	Bid accepted for 6 by 20 straight and 6 by 20 and 8 by 8 circular.
Rennie & McIntosh, Granite, Va.	.69				5,000 feet. Bid accepted for 8 by 8 straight curb.
	.70½				10,000 feet.
Brandywine Granite Co., Wil- mington, Del.	.84½	1.30	1.94	2 1.29	1 490.2 linear feet; 2 59 linear feet.
			3 1.04	4 1.40	3 10,000 linear feet; 4 500 lin- ear feet.
George Pierce, Frankfort, Me.	.79	1.09	.93	1.27	

*Proposals for furnishing granite curbing, opened November 2, 1894.*

Bidder.	6 by 20 inch curb- ing (per linear foot).	5 by 16 inch curb- ing (per linear foot).	To be delivered.	Remarks.
A. O. Venable, Atlanta, Ga.	\$0.88	\$0.86	Dec. 1, 1894	
A. B. Cook, Petersburg, Va.	.78	.60	do	Bid accepted.
Brandywine Granite Co., Wilmington, Del.		1.15		
J. F. Manning, Washington, D. C.	1.14	.99		
Acker & Co., Washington, D. C.	1.15	.90		
Geo. Pierce, Frankfort, Me.	.79	.67		

*Proposals for furnishing curbing, opened March 25, 1895.*

## 8 by 8 inch curbing.

Bidder.	Quantity of straight curbing (linear feet).	Price of straight curbing (per linear foot).	Quantity of circular curbing (linear feet).	Price of circular curbing (per linear foot).	Cost per 100 feet of straight and circular curbing.
Brandywine Granite Co., Wilmington, Del. <sup>1</sup>	16,000	\$0.67½	850	\$1.00	\$69.12
Winnaboro Granite Co., Charleston, S. C.	17,000	.68	850	.98	69.50
Francis Jones, Lithonia, Ga. <sup>2</sup>	13,600	.73½	3,400	1.15	75.69
Charles S. Ferguson, New York City.	10,000	.92	500	1.34	94.10
	7,000	.87	350	1.34	89.35
Frank Peach, Washington, D. C.	10,000	.73½	500	1.03	74.98
Acker & Co., Washington, D. C.	17,000	.69	850	.98	70.45
Rennie & McIntosh, Granite, Va.	6,000	.75			76.50
	6,000	.77½	600	1.05	78.87
A. B. Cook, Petersburg, Va.	5,000	.76	250	1.00	77.20
	10,000	.80	500	1.00	81.00
	15,000	.84	750	1.00	84.80
William F. Weller, Granite, Md.	4,000	.70	200	1.06	71.80
	4,000	.71	200	1.07	72.80
	4,000	.72	200	1.08	73.80
Geo. Peirce, Frankfort, Me.	5,000	.75	250	1.17	77.10
	5,000	.80	250	1.17	81.85
	7,000	.85	350	1.17	86.60
Campbell & Macomber <sup>3</sup>					
George L. Benner, Washington, D. C. <sup>3</sup>					

*Proposals for furnishing curbing, opened March 25, 1895—Continued.*

Bidder.	6 by 20 inch curbing.					Delivery to be commenced.	Delivery to be completed.
	Quantity of straight curbing (linear feet).	Price of straight curbing (per linear foot).	Quantity of circular curbing (linear feet).	Price of circular curbing (per linear foot).	Cost per 100 linear feet of straight and circular curbing.		
Brandywine Granite Co., Wilmington, Del. <sup>1</sup>	24,000	\$0.95	1,300	\$1.25	\$96.50	May	Nov.
Winnboro Granite Co., Charleston, S. C.	26,000	.76½	1,300	1.08	77.84	May 1	Nov. 1.
Francis Jones, Lithonia, Ga. <sup>2</sup>	20,800	.74½	5,200	1.22	76.64	do	Do.
Chas. S. Ferguson, New York City	16,000	1.07	800	1.51	109.20	As per specifications.	
Frank Peach, Washington, D. C.	10,000	.98	500	1.51	100.65	Within 10 days.	Sept. 1.
	1,500	.84½	75	1.38	87.18	As per specifications.	
Acker & Co., Washington, D. C.	26,000	.93½	1,300	1.23	94.97	As per specifications.	
Bennie & McIntosh, Granite, Va.						May	Oct.
A. B. Cook, Petersburg, Va.	6,000	.88	300	1.20	89.60	As per specifications.	
	1,200	.92	60	1.20	93.40		
	7,200	.96	360	1.20	97.20		
William F. Weller, Granite, Md.	4,000	.85	200	1.23	86.90		
	4,000	.86	200	1.24	87.90	April	Dec.
	4,000	.87	200	1.25	88.90		
Geo. Peirce, Frankfort, Me.	5,000	.83	250	1.33	85.50		
	5,000	.87	250	1.33	89.30		
	5,000	.90	250	1.33	92.15	As per specifications.	
	5,000	.97	250	1.33	98.80		
	6,000	1.03	300	1.33	104.50		
Campbell & Macomber <sup>3</sup>							
Geo. L. Benner, Washington, D. C. <sup>3</sup>							

<sup>1</sup> Bid accepted for 8 by 8 inch curbing.<sup>3</sup> Bid informal. No certificate of deposit.<sup>2</sup> Bid accepted for 6 by 20 inch curbing.*Proposals for furnishing 300 street lanterns, opened May 17, 1895.*

Bidder.	Price per lantern.	Remarks.
H. I. Gregory, Washington, D. C.	\$4.44	
Pennsylvania Globe Gas Light Co., Philadelphia, Pa.	4.35	Bid accepted.
Coleman & Son, Washington, D. C.	4.65	See letter.
Jacob G. Miner, New York City	5.00	For cut marked No. 1 see bid.
Do.	6.00	For cut marked No. 2 see bid.
Do.	3.75	For cut marked No. 3 see bid.
Do.	4.15	For cut marked No. 4 see bid.
Do.	5.15	For cut marked No. 4, with 4 signs in glass.
John L. Gaumer Co., Philadelphia, Pa.	4.42	

*Proposals for furnishing cement, opened September 22, 1894.*

(Price per barrel.)

Bidder.	Natural hydraulic cement.							Portland cement.	
	At District of Columbia cement house.				At bidder's warehouse.			At District of Columbia cement house in barrels.	At bidder's warehouse in barrels.
	In barrels.	In hemp or canvas bags.	In paper bags.	In barrels.	In hemp or canvas bags.	In paper bags.	In bulk.		
Morris Ebert, Philadelphia, Pa.								\$2.46	
Cranford Paving Co., Washington, D. C.								2.37	\$2.30
S. J. Block, president Cedar Cliff Cement Co., Washington, D. C. <sup>1</sup>	\$1.05	\$0.84	\$0.94	\$1.00	\$0.79	\$0.89	\$0.75	2.25	2.20
Atlas Cement Co., New York City <sup>2</sup>								2.12	2.20
W. J. Donaldson & Co., Baltimore, Md.								2.15	
Jas. H. McGill, Washington, D. C.	1.11	.90	.95	1.03	.83	.88	.80	2.29	2.29
J. G. & J. M. Waters, Washington, D. C.	1.08	.82		1.05	.79				
Commercial Wood and Cement Co., Philadelphia, Pa.								2.40	2.20
C. B. Wallis & Co., Baltimore, Md.								2.65	

<sup>1</sup> Bid accepted for natural cement.<sup>2</sup> Bid accepted for Portland cement.*Proposals for furnishing sewer pipe and invert blocks, opened October 13, 1894.*

Bidder.	6-inch pipe (per linear foot).	8-inch pipe (per linear foot).	10-inch pipe (per linear foot).	12-inch pipe (per linear foot).	15-inch pipe (per linear foot).	18-inch pipe (per linear foot).	21-inch pipe (per linear foot).	24-inch pipe (per linear foot).	8 by 6 inch Y-pipe (each).
Potomac Terra Cotta Co., Washington, D. C.	\$0.05	\$0.08	\$0.10	\$0.11 $\frac{1}{2}$	\$0.18 $\frac{1}{2}$	\$0.26 $\frac{1}{2}$	\$0.40	\$0.49	\$0.30
Union Sewer Pipe Co., Akron, Ohio.	.06 $\frac{1}{2}$	.10	.14 $\frac{1}{2}$	.17	.25	.42 $\frac{1}{2}$	.62 $\frac{1}{2}$	.81	.45
J. A. Hayden, Frederick, Md.									
Jno. Robrecht, Wheeling, W. Va.	.05 $\frac{1}{2}$	.08 $\frac{1}{2}$	.12 $\frac{3}{4}$	.15 $\frac{3}{4}$	.23	.31	.45 $\frac{1}{2}$	.59	.37 $\frac{1}{2}$
Freeman Fire Clay Co., Freeman, Ohio.	.05 $\frac{1}{2}$	.08 $\frac{1}{2}$	.13 $\frac{1}{2}$	.17 $\frac{1}{2}$	.25	.37	.60	.71 $\frac{1}{2}$	.44 $\frac{1}{2}$
McMahon, Porter & Co., New Cumberland, W. Va.	.06	.09	.13	.17	.25	.34	.50	.65	.41
Royal Clay Manufacturing Co., Uhrichsville, Ohio.	.05	.08	.11 $\frac{1}{2}$	.15 $\frac{1}{2}$	.22 $\frac{1}{2}$	.30 $\frac{1}{2}$	.45	.58 $\frac{1}{2}$	.36 $\frac{1}{2}$
Thos. Somerville & Sons, Washington, D. C. <sup>1</sup>	.04 $\frac{1}{2}$	.06 $\frac{1}{2}$		.13	.18 $\frac{1}{2}$	.26 $\frac{3}{4}$	.40	.53	.30
Angus Lamond, Takoma, D. C.	.06	.09							

Bidder.	10 by 6 inch Y pipe (each).	12 by 6 inch Y pipe (each).	15 by 6 inch Y pipe (each).	18 by 6 inch Y pipe (each).	21 by 6 inch Y pipe (each).	24 by 6 inch Y pipe (each).	6-inch bends (each).	Invert blocks (per linear foot).
Potomac Terra Cotta Co., Washington, D. C.	\$0.41	\$0.46	\$0.75	\$1.13	\$1.63	\$2.08	\$0.17	\$0.49 $\frac{1}{2}$
Union Sewer Pipe Co., Akron, Ohio.	.65	.76 $\frac{1}{2}$	1.12 $\frac{1}{2}$	1.90	2.81	3.60	.22	
J. A. Hayden, Frederick, Md.								.44
Jno. Robrecht, Wheeling, W. Va.	.53 $\frac{1}{2}$	.69 $\frac{1}{2}$	1.05	1.44	2.12 $\frac{1}{2}$	2.77 $\frac{1}{2}$	.20	
Freeman Fire Clay Co., Freeman, Ohio.	.64 $\frac{1}{2}$	.85	1.23	1.68	3.00	3.21	.20	.70
McMahon, Porter & Co., New Cumberland, W. Va.	.59	.77	1.12	1.53	2.25	2.92	.22	.60
Royal Clay Manufacturing Co., Uhrichsville, Ohio.	.52 $\frac{1}{2}$	.69	1.01	1.37 $\frac{1}{2}$	2.02 $\frac{1}{2}$	2.62 $\frac{1}{2}$	.20	{ .47 $\frac{1}{2}$ .51 $\frac{1}{2}$ .51 $\frac{1}{2}$
Thos. Somerville & Sons, Washington, D. C.							.16	
Angus Lamond, Takoma, D. C.							.22	.40

<sup>1</sup> Bids accepted.<sup>2</sup> Large size.<sup>3</sup> Small size.



*Proposals for painting Connecticut avenue bridge, opened March 15, 1895.*

Bidder.	Price.
James Linskey & Son, Washington, D. C. <sup>1</sup>	\$775.00
Hobson & Clarke, Washington, D. C.	825.00

<sup>1</sup> Bid accepted.*Proposals for furnishing sand, pebbles, and broken stone, opened September 22, 1894.*

[Price per cubic yard.]

At District sand yard.										
Bidder.	Concrete sand (2,000 yards).		Paving sand (5,000 yards).		Building sand (320 yards).		Screened pebbles (3,500 yards).		Broken stone (3,500 yards).	
	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.
E. G. Gummel, Washington, D. C.									\$2.35	\$8,225.00
C. G. Smith & Sons, Washington, D. C.									1.45	5,075.00
Jas. T. Summers, Washington, D. C.	\$0.60	\$1,200.00	\$0.59	\$2,950.00	\$0.79	\$252.80	\$0.75	\$2,625.00		
John B. Lord, Washington, D. C.	.57	1,140.00	.57	2,850.00	.79	252.80	.79	2,765.00		

At bidder's yard.										
Bidder.	Concrete sand (2,000 yards).		Paving sand (5,000 yards).		Building sand (320 yards).		Screened pebbles (3,500 yards).		Broken stone (3,500 yards).	
	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.
E. G. Gummel, Washington, D. C.									\$2.00	\$7,000.00
C. G. Smith & Sons, Washington, D. C.									1.35	4,725.00
Jas. T. Summers, Washington, D. C. <sup>1</sup>	\$0.60	\$1,200.00	\$0.59	\$2,950.00	\$0.79	\$252.80	\$0.75	\$2,625.00		
John B. Lord, Washington, D. C.	.57	1,140.00	.57	2,850.00	.79	252.80	.79	2,765.00		

<sup>1</sup> Bid accepted for screened pebbles; no award for sand.

# 232      ENGINEER DEPARTMENT, DISTRICT OF COLUMBIA.

*Proposals for furnishing sand, pebbles, and broken stone, opened June 6, 1895.*

[Price per cubic yard.]

Bidder.	At District sand yard.									
	Paving and concrete sand (10,000 cubic yards).		Building sand (500 cubic yards).		Screened pebbles (3,500 cubic yards).		Broken stone (3,500 cubic yards).		Coarse sand from gravel (10,000 cubic yards).	
	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.
J. T. Summers, Washington, D. C. <sup>1</sup> .....	\$0.44	\$4,400.00	\$0.60	\$300.00	\$0.54	\$1,890.00	.....	.....	.....	.....
Jno. B. Lord, Washington, D. C. <sup>1</sup> .....	.47	4,700.00	.70	350.00	.70	2,450.00	.....	.....	\$0.35	\$3,500.00
C. G. Smith & Son, Washington, D. C. <sup>1</sup> .....	.....	.....	.....	.....	.....	.....	\$1.58	\$5,530.00	.....	.....
Allen B. Clark, Washington, D. C. <sup>2</sup> .....	.....	.....	.....	.....	.....	.....	2.10	7,350.00	.....	.....
Henry S. McGlue, Washington, D. C. <sup>2</sup> .....	.....	.....	.....	.....	.75	2,625.00	.....	.....	.....	.....

Bidder.	At bidder's yard.									
	Paving and concrete sand (10,000 cubic yards).		Building sand (500 cubic yards).		Screened pebbles (3,500 cubic yards).		Broken stone (3,500 cubic yards).		Coarse sand from gravel (10,000 cubic yards).	
	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.	Price.	Cost.
J. T. Summers, Washington, D. C. <sup>1</sup> .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jno. B. Lord, Washington, D. C. <sup>1</sup> .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. G. Smith & Son, Washington, D. C. <sup>1</sup> .....	\$0.47	\$4,700.00	\$0.70	\$350.00	\$0.70	\$2,450.00	.....	.....	\$0.35	\$3,500.00
Allen B. Clark, Washington, D. C. <sup>2</sup> .....	.....	.....	.....	.....	.....	.....	\$1.40	\$4,900.00	.....	.....
Henry S. McGlue, Washington, D. C. <sup>2</sup> .....	.....	.....	.....	.....	.....	.....	1.73	6,055.00	.....	.....
.....	.....	.....	.....	.....	.75	2,625.00	.....	.....	.....	.....

<sup>1</sup> Bid accepted

<sup>2</sup> No deposit.

*Proposals for hauling material, opened August 20, 1894.*

	D. Gaskins, Washington, D. C.	Geo. W. Knox Ex- press, Washington, D. C.	Frank E. Hopkins, Washington, D. C.	Patrick H. Horn and Richard Horn, jr., Washington, D. C.	Thomas R. Riley, Washington, D. C.
<b>South of Florida avenue and Bennings road, between Eastern Branch and Rock Creek:</b>					
Granite blocks..... per M.	\$2.50		\$5.00	\$3.30	\$11.00
Sand..... per cubic yard.	.40		.40	1.39	2.50
Vitrified brick..... per M.	1.20		1.15	1.23	2.50
Ordinary brick..... do.	.95		1.15	1.90	2.50
6 by 20 curb..... per linear foot.		1.08			.50
8 by 8 curb..... do.		1.06			.50
<b>City of Georgetown:</b>					
Granite blocks..... per M.	3.50		6.50	4.00	11.00
Sand..... per cubic yard.	1.60		.66 <sup>1</sup>	.67	2.75
Vitrified brick..... per M.	1.45		1.75	1.65	2.50
Ordinary brick..... do.	1.20		1.40	1.34	2.50
6 by 20 curb..... per linear foot.		1.08			.50
8 by 8 curb..... do.		1.06			.50
<b>County of Washington east of Eastern Branch:</b>					
Granite blocks..... per M.	3.00		5.50	3.50	13.00
Sand..... per cubic yard.	1.45		.45	.45	2.75
Vitrified brick..... per M.	1.25		1.55	1.20	3.00
Ordinary brick..... do.	1.20		1.40	1.30	3.00
6 by 20 curb..... per linear foot.		1.10			.60
8 by 8 curb..... do.		1.08			.60
<b>County of Washington between Eastern Branch and Rock Creek, not over 1½ miles from Florida avenue:</b>					
Granite blocks..... per M.	3.00		6.50	4.00	14.00
Sand..... per cubic yard.	1.65		.90	.75	3.00
Vitrified brick..... per M.	1.20		2.35	1.90	3.00
Ordinary brick..... do.	1.20		1.50	1.33	3.00
6 by 20 curb..... per linear foot.		1.10			.65
8 by 8 curb..... do.		1.08			.65
<b>County of Washington west of Rock Creek, within 1 mile of Georgetown:</b>					
Granite blocks..... per M.	5.00		8.00	5.00	14.00
Sand..... per cubic yard.	.90		.90	1.88	3.00
Vitrified brick..... per M.	2.40		2.50	1.25	3.00
Ordinary brick..... do.	1.90		2.25	1.95	3.00
6 by 20 curb..... per linear foot.		1.10			.65
8 by 8 curb..... do.		.08			.65

<sup>1</sup> Bid accepted.*Proposals for hauling for water department, opened June 10, 1895.*

[Per ton of 2,240 pounds.]

Bidder.	Within the boundary lines of Wash- ington and Georgetown.	Outside the boundary lines of Wash- ington and Georgetown, within the District.
Geo. W. Knox Express, Washington, D. C.	\$0.68	\$0.88
Fred. Springman, Washington, D. C.	.69	.89
John L. Newbold, Washington, D. C.	}	.56
Chas. Newbold, Washington, D. C. <sup>1</sup>		

<sup>1</sup> Bid accepted.

*Proposals for hauling vitrified blocks, opened October 13, 1894.*

[Per thousand.]

Bidder.	In city and county of Washington, south of Florida avenue and Benning road and between Eastern Branch and Rock Creek.	In city of Georgetown.	In county of Washington east of the Eastern Branch.	In county of Washington between Eastern Branch and Rock Creek and not over 1½ miles from Florida avenue.	In county of Washington west of Rock Creek, within 1 mile of Georgetown.
Frank E. Hopkins, Washington, D. C. ....	\$2.50	\$3.30	\$3.30	\$3.75	\$5.00
Darius Gaskins, Washington, D. C. ....	1.40	2.00	1.70	2.00	3.00
Patrick H. Horn and Richard J. Horn, jr., Washington, D. C. ..	1.40	1.95	1.40	1.50	1.75

<sup>1</sup> Bid accepted.*Proposals for furnishing water meters and fish traps, opened April 20, 1895.*

## PRICES BID FOR METERS.

Bidder.	Meters.		½-inch meter (15).	¾-inch meter.	1-inch meter (200).
	Name.	Type.			
Thomson Meter Co., Brooklyn, N. Y. ....	Bee .....	Disk .....	\$8.45	\$6.45	\$12.65
National Meter Co., New York City <sup>1</sup> ..	Crown .....	Rotary .....	13.50		22.50
Do .....	Nash .....	Disk .....	9.50		14.00
H. R. Worthington, New York City .....	Worthington .....	Piston .....	11.65		17.50
Union Meter Co., Worcester, Mass. <sup>1</sup> ..	Union .....	Rotary .....	11.50		17.00
Do. <sup>2</sup> .....	Ball and Fitts .....	Piston .....	15.00		22.00
Metropolitan Meter Co., Boston, Mass. <sup>2</sup> .	Metropolitan .....	do .....	23.00		34.00

Bidder.	1-inch meter (150).	1½-inch meter (50).	2-inch meter (35).	3-inch meter (8).	4-inch meter (2).	6-inch meter (1).
Thomson Meter Co., Brooklyn, N. Y. ....	\$16.90	\$32.25	\$50.00 35.00	\$82.50	\$195.00	\$390.00
National Meter Co., New York City <sup>1</sup> ..	30.00	55.00	75.00	150.00	300.00	600.00
Do .....	19.00	37.50	60.00	100.00	240.00	480.00
H. R. Worthington, New York City .....	23.75	31.00	40.00	80.00	225.60	560.00
Union Meter Co., Worcester, Mass. <sup>1</sup> ..	24.00	37.50	56.00	100.00	200.00	420.00
Do. <sup>2</sup> .....	30.00					
Metropolitan Meter Co., Boston, Mass. <sup>2</sup> .	48.00	75.00	110.00			

## PRICES BID FOR FISH TRAPS.

Bidder.	¾-inch fish trap (15).	¾-inch fish trap.	1-inch fish trap (200).	1-inch fish trap (150).	1½-inch fish trap (50).	2-inch fish trap (35).	3-inch fish trap (8).	4-inch fish trap (2).	6-inch fish trap (1).
Thomson Meter Co., Brooklyn, N. Y. ....	\$2.00	\$2.00	\$2.00	\$4.00	\$8.00	\$8.00	\$12.00	\$18.00	\$25.00
National Meter Co., New York City <sup>1</sup> ..	1.00	.....	1.25	1.50	5.00	5.00	8.00	14.00	20.00
H. R. Worthington, New York City .....	2.25	.....	2.25	3.80	3.60	5.25	8.60	15.35	17.50
Union Meter Co., Worcester, Mass. <sup>1</sup> ..	2.00	.....	2.00	4.00	7.50	7.50	12.00	18.00	30.00

All bids rejected.

<sup>1</sup> See letter attached.<sup>2</sup> See letter attached. Ten 1½-inch meters can be delivered 2 months after receipt of order.

*Proposals for furnishing special castings, opened August 18, 1894.*

Bidder.	Price per pound.	Remarks.
Weimer Machine Works Co., Lebanon, Pa.....	\$0.02 <sup>1</sup> / <sub>10</sub>	Telegram. Bid accepted; 45 per cent off list prices for globe specials.
W. H. March, Philadelphia, Pa.....	0.02 <sup>1</sup> / <sub>10</sub>	
Reading Foundry Co., Reading, Pa.....	0.02 <sup>1</sup> / <sub>10</sub>	
Builders' Iron Foundry, Providence, R. I.....		

*Proposals for paving alleys in squares 214 and 218 with sheet asphalt on cobble, opened November 27, 1894.*

Bidder.	Laying standard asphalt pavement (3,509 square yards, per square yard).		Laying asphalt binder (279 cubic yards, per cubic yard).		Laying bituminous base (35 cubic yards, per cubic yard.)		Total cost.
	Price.	Total.	Price.	Total.	Price.	Total.	
The Barber Asphalt Paving Co., New York City.....	\$0.90	\$3,158.10	\$11.00	\$3,069.00	\$3.00	\$105.00	\$6,332.10
The Cranford Paving Co., Washington, D. C.....	1.14	4,000.26	7.20	2,008.80	3.00	105.00	6,114.06
Thomas H. Thomas, New York City.	.67	2,351.03	13.50	3,766.50	4.00	140.00	6,257.53

All bids rejected.

*Proposals for paving alleys with sheet asphalt, asphalt block, and vitrified brick or block, opened December 7, 1894.*

Bidder.	Laying asphalt block pavement on 6-inch gravel base, per square yard.	Laying vitrified brick or block pavement on 6-inch gravel base, per square yard.	Remarks.
	<i>Cents.</i>	<i>Cents.</i>	
Interstate Vitrified Brick and Paving Co., Philadelphia, Pa.....	89	89	Bid accepted.
Hussey & Brown, Washington, D. C.....	53	68	
Lyons Bros., Washington, D. C.....	63	78	

*Proposals for paving alleys, opened February 11, 1895.*

Bidder.	With asphalt block (810 square yards).		With vitrified brick or block (9,060 square yards).		Total cost.	Remarks.
	Price.	Cost.	Price.	Cost.		
Hussey & Brown, Washington, D. C...	\$0.59	\$477.90	\$0.95	\$8,607.00	\$9,084.90	Bid accepted.
Lyons Bros., Washington, D. C.....	.64	518.40	.74	6,704.40	7,222.80	
Horn & Gaskins, Washington, D. C...	.63	510.30	.73	6,616.80	7,127.10	





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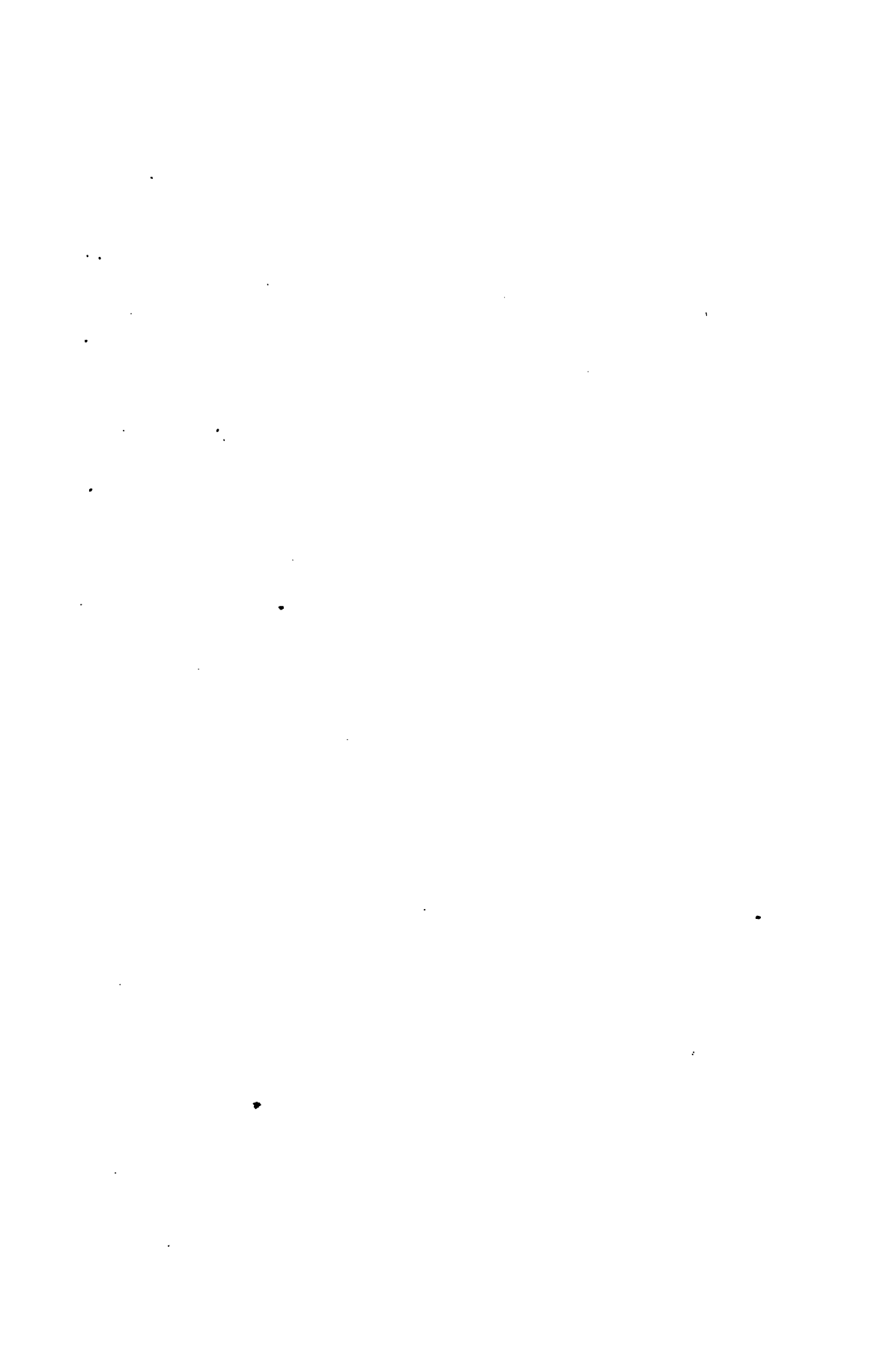
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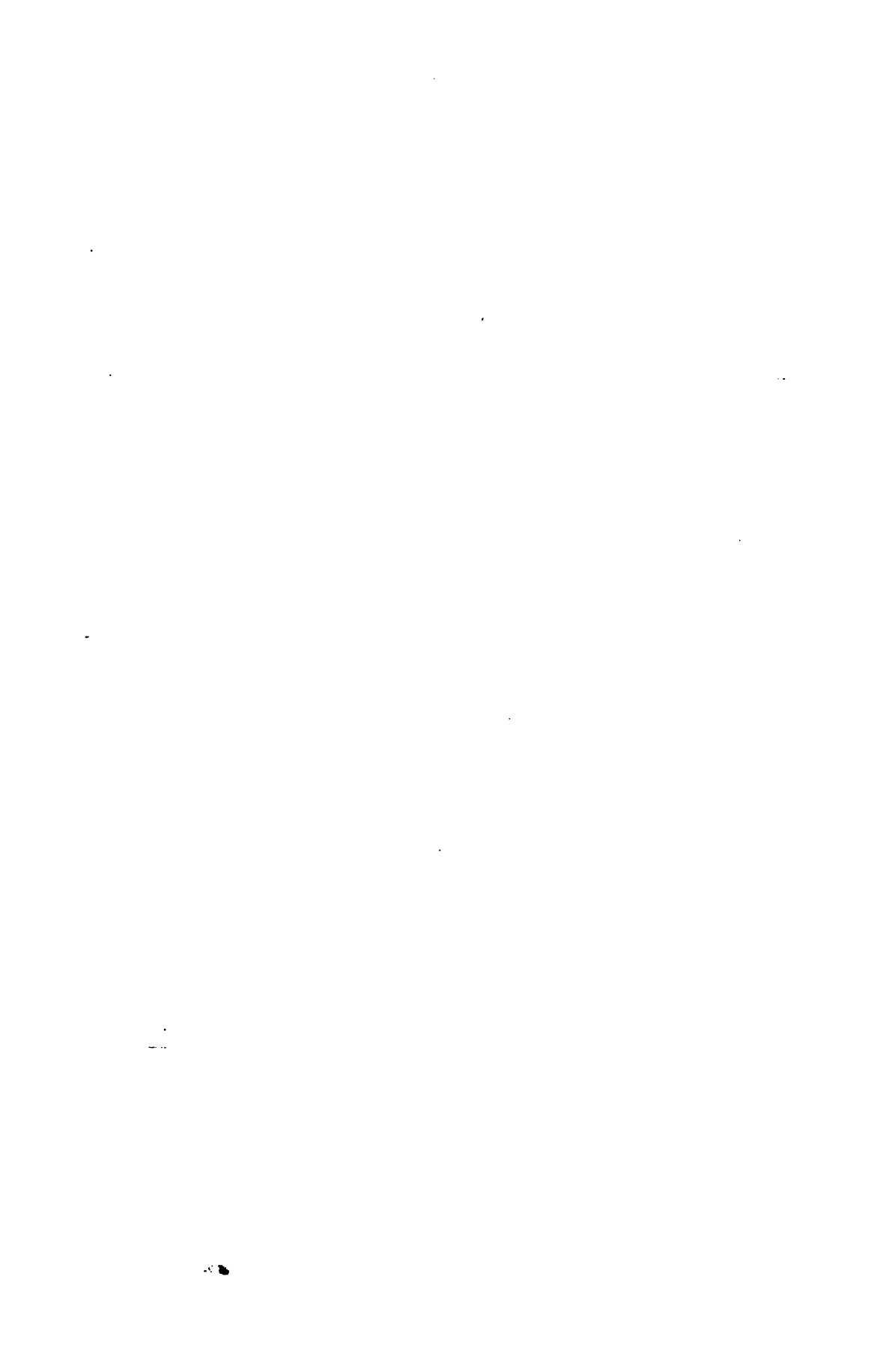














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